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Special Articles

This Month

Spraying for Control of Orchard Pests
Apple and Pear Acquisition
Fertilising Deciduous Fruits
Tatura (Vic.) Research Orchard
Market Grower Section
Interstate News and Notes
Canned, Dried and Citrus Fruits
The Murrumbidgee Irrigation Areas
Pig and Poultry Notes

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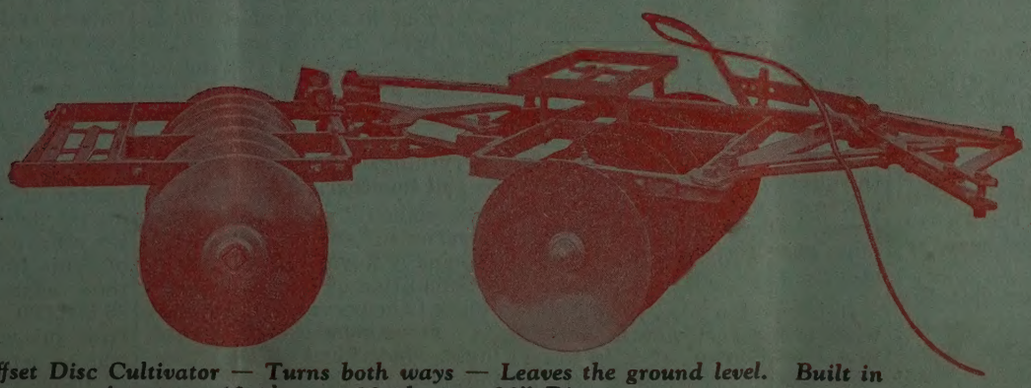

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Extract from "BETTER FRUIT," March, 1937, by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLIN MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1926, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codlin moth control."

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PITHY BITS

By "Gadabout"

"Gadabout" introduces himself,

Who am I? By way of identification, not recommendation, I've been years in Parliament, I've known fruit and vegetables for nearly half a century and I am just beginning to find out something about it. When I know what it is I will tell you. In the meanwhile, readers are asked to help me find it.

I'm just a bit of "Awl-right" and never wrong. Just rub it in if you think I am. I'm 6 ft. high and as good looking as ever I've been,

"I was my Mother's despair
As she parted my hair
And now I'm a wife's last hope."

Just who am I? Well, I am "Gadabout." Will you stand in with "Gadabout"? Tell me all you know about fruit. Send me "PITHY BITS." Tell me the things of humor. Tell me of the wonders you've done in that orchard or market garden of yours. Tell me the things of despair. Tell me your problems. Write to me. Call me what you like, but address it to

"Gadabout,"
C/o "The Fruit World and Market Grower,"
Box 1944 G.P.O.,
Melbourne.

Will you help me write a column of "Pithy Bits"? Our first thoughts and words must go to "The Empire" and the war, then to the fruitgrower and his war problems. In the words of Gillespie Douglas, the Australian poet, who has been heard recently over the air:

"England shall never die: Her flag unfurled,
Flies as God's symbol to a broken world,
To crush a tyrant's power and tyranny,
And raise a Throne of righteous liberty."

Nearly all the world is at war but we have to go on with our daily toil, manfully facing our problems.

Markets — Markets — Markets. Some closed and others limited to us. We must find others. Can Australians consume more fruit and vegetables?

Labor — Labor — Labor. Our boys are going into camp. How then can we carry on? Of course our sons are answering the call of Empire for they come of an unbeatable stock, a stock that has fought when fruit orchards and market gardens have crashed in value and mortgages have risen. Fought on unbeatable when scale, aphis, black, brown and yellow spot, codling moth and other moths and flies, brown rot and other rots, and so on ad nauseam, threatened their all and now there is this world trouble. Let us spray Hitler and Mussolini, the pests that are eating into the kernel of civilisation, of peace, of contentment, of prosperity. Man the pumps, turn on the taps, let us do our bit. The bigger the fight the greater the victory. **If we let our own affairs down we are helping to let the Empire and the Boys down.**

Let Us Carry On.

Is there any doubt that there must be some method of organised selling and marketing? Just how should it be done is the question. The growers themselves must have control, say some. There must be a minimum price for our products, say others.

It is not too soon to find out what is the best way to constitute Pool Control, if it is to be constituted. Those who are in opposition to Apple and Pear Acquisition Scheme should at once declare just what they would substitute for it, but above everything, let us find a way **to pull together.**

"Gadabout" suggests that the Government should be asked to appoint a Royal Commission or a Committee of Members of the House to hear evidence and make its recommendations accordingly. Individual State Commissions or Committees might be advisable.

In our next issue "Gadabout" will deal with "Local Marketing" and other matters.

Developing the Fruit Industry

Ogranisation, Standardisation, Advertising

Importance of the Fruit Drink Trade

ADDRESSING a conference in Sydney recently, Mr. E. C. Sommerlad, M.L.C., spoke of the popularity that fruit drinks have achieved in U.S.A. where there is more fruit drunk than in any other country in the world.

"We should learn to drink our fruit as well as eat it!" he said. "Especially as no country in the world is so well suited for the establishment of such an industry."

Mr. Sommerlad outlined the history of Californian citrus growers from 1892, when the industry was faced with outright ruin, to the present day, when it ranks second only to oil as a revenue producer. Co-operation and standardisation, with forceful and original advertising, he said, had made the Californian citrus growers probably the most prosperous primary producers in the world.

What we do not realise here is that primary products are as amenable to modern merchandising as any other product, Mr. Sommerlad said, and what had been done in California could be done here. In 1892, many Californian growers were selling for 10 cents a box of Oranges which had cost them 50 cents a box to produce. It was a saying of that time that "the more Oranges a grower had the greater his indebtedness to his packer." Growers in individual districts set about establishing co-operative societies, and later put on the market a standard Orange pack.

Their first objective

was to obtain the confidence of the buying public, and, once that was gained, sales rose rapidly. The first advertising allocation was in 1905, and was for £50. Two years later it had risen to £2,000. To overcome the problem of those growers who were prepared to accept the benefits of co-operation, but who refused to co-operate, the now world-famous trade name "Sunkist" was adopted, and last year 75 per cent. of the Oranges marketed from California carried that name.

From such a modest beginning, he said, had grown an industry which returned to California and Arizona £12,600,000, yet the vast advertising campaigns and other publicity features of a nation-wide nature absorbed less than 3 per cent. of the gross profits.

The

fruit juice industry

was an offshoot of the larger industry, but from a consumption ten years ago of one million cases of fruit juices, excluding cider, the demand had grown to 80,000,000 gallons of canned fruit juices and 50,000,000 gallons of canned Tomato juice. In addition, tremendous quantities of fresh juices and sweet cider were produced, the volume of which was impossible to calculate.

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News of the Month

VALUE OF FRUIT AND VEGETABLES.

NO MORE STRIKING VINDICATION of the attitude taken up by this Journal in relation to national health could have been provided than by the book just published by Sir John Orr, Britain's leading specialist on food and nutrition. This book is entitled "Feeding the People in War Time."

Meat is low down on the list of essential foods, while great emphasis is laid on the value of milk, fruit and vegetables.

Millions of acres of land — including park lands—in Britain, have been ploughed up and planted with vegetables. Home vegetable culture has been encouraged. There is more food and health value in simple natural foods than has been so far generally recognised.

These natural foods cost less, hence limited family incomes can be made to go further, and better health will be the result.

The various growers' Associations and control Boards associated with the several phases of the fruit industry have for years been hammering away at this subject—now their efforts will be wonderfully reinforced by Sir John Orr's official scientific statements.

Thus, it will be seen that the growers' of fruit and vegetables are amongst the most important citizens of this Commonwealth. This knowledge will add dignity to labor, and better financial returns should be the inevitable outcome.

APPLE AND PEAR ACQUISITION.

WITH THE REASONABLE ANTICIPATION of substantially heavier crops of Apples and Pears in Australia in 1941 than in 1940, and facing the probability of lessened exports, the recent conference at Canberra faced squarely up to the position. The difficulties to be overcome in arriving at a unified programme were evident if only in the fact that the conference lasted four days, and even then there was not unanimity.

The broad fact emerges that the industry can only be considered on a Commonwealth-wide basis, though in the resolutions adopted it was asked that consideration be given as far as practicable to any special disabilities.

The re-working of uncommercial varieties, to which attention has been given for years past, will be speeded up.

ASSISTING ENLISTED ORCHARDISTS.

An Appreciated Gesture.

Several instances are reported from fruitgrowing districts in which local growers are undertaking to assist in the working of orchards left by men who have enlisted in the A.I.F. so that when the men return their orchards will at least not have been entirely neglected. This is a remarkable tribute to the loyalty of the men of the A.I.F. and also to the wonderful reaction of those who stay behind and shoulder this added responsibility.

In these days of national emergency, we all have to roll up our sleeves and do what we can, and the gesture of such assistance is greatly appreciated. In addition to the National Service Guard of older men who will undertake the protection of valuable assets, such as public undertakings and industrial plants, the production of primary necessaries is of vital importance and the orchardists are already contributing much.

Recruiting figures from fruit areas show how well producers and employees have responded, indeed this ready response is already affecting the increasing problem of labor shortage which will become more pressing as still further men sign up for defence purposes.

In America, most people buy both fruit and vegetables at the grocery stores. The West Virginia Retail Growers' Association conduct a school to teach salesmen the best way to sell their goods. Display and salesmanship are included in the course.

Importance of Fruit and Vegetables

More Important Than Meat for War Needs

DURING the 1914-18 war, the "Fruit World" published an article written by an eminent medical authority entitled "Fruit Will Win the War." This article caused a good deal of comment at the time, but it was deemed by many to be too revolutionary in relation to dietary habits.

Yet steadily the value of the vitamins and mineral salts in fresh fruit and vegetables has come to be recognised.

Now, Britain's outstanding authority on food and nutrition —Sir John Orr—has emphasised this matter in his book entitled "Feeding the People in War Time." It will come as a shock to many to see bacon, frozen beef and eggs among the lowest on the list.

Many striking arguments are presented for increasing the consumption of milk, fruit and vegetables by subsidising production and making these essentials available at a price low enough to bring them within range of all.

Indeed it is believed that people can be better—that is, more scientifically — fed at a lower cost than now prevails and that malnutrition can be eliminated by a closer adherance to the simple diet of natural products — not devitalised by manufacturing and other processes.

Dried Fruit Notes

S.A. DRIED FRUITS BOARD.

A MEETING of the S.A. Dried Fruits Board was held on July 24, 1940. The business disposed of was, for the greater part, of a routine nature comprising a review of the latest pack figures, the passing of a/cs for payment, reports by Inspectors, etc.

Minutes of meetings of the Consultative and Publicity Committees held in Sydney on July 4, 1940, were submitted and noted, and revised home consumption quotas as recommended by the Consultative Committee were approved.

The Secretary (Mr. W. N. Twiss) reported that advice had been received of the approval by other State Boards to the Committee's recommendation for quotas.

The Secretary also reported that contracts had been entered into by the Publicity Committee for comprehensive window displays of dried fruit in retailers' stores in Adelaide and suburbs.

In the matter of testing of scales and weights in packing houses, it was agreed to circularise later in the year all packers with a view to tests being made regularly.

Letter from the Commonwealth Dried Fruits Control Board was received advising the acquisition by the Imperial Government of the balance of stocks of 1940 season's dried vine fruit reserved for the United Kingdom.

Further assessments of the annual contribution for the year 1940 were made on packing houses which had completed operations for the season.

The Secretary reported that the Eleventh Report of the Board for the year 1939-1940 was laid on the Table of Parliament on July 11, 1940, and a supply had been ordered from the Government Printer.

An informative report prepared by the Chief Horticulturist of the Department of Agriculture (Mr. A. G. Strickland, M.Ag.Sc.) on experimental work on cultural problems was submitted and the Secretary was directed to arrange for press publication. It was agreed to continue the Board subsidy towards the salary and expenses of the Research Officer until June 30, 1941, when the position would be reviewed.

VICTORIAN DRIED FRUITS BOARD.

Mr. Rawlings Elected.

It will be remembered that Mr. A. Rawlings resigned from the Victorian Dried Fruits Board in order to contest the Mildura electorate as a candidate for the United Country Party at which election he was defeated. His resignation created a vacancy, to fill which an extraordinary election was held. He re-nominated for election to the Board, and a further nomination was lodged by Mr. A. R. McDougall, of Merbein. Both are growers in the Merbein area, and both are returned soldiers.

The result of the ballot was that Mr. Rawlings was elected and will remain one of three growers' representatives for the Mildura district. He has been a representative on the Board since 1924. Mr. R. F. Mansell and Mr. H. V. Davey are the other growers' representatives.

(Continued on page 12.)

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Excellent Starting
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Winter and Spring Spraying

CONTROL MEASURES FOR PESTS

Peach Aphid ❦ *Woolly Aphid* ❦ *San Jose Scale*

WINTER control of common fruit tree pests is one of the important parts of the orchardists' work, and although certain pests affect various fruit districts in more or less damaging forms, this season in Victoria promises to be about normal, and growers should prepare for potential outbreaks. In an interview with Mr. J. L. Provan, of the Department of Agriculture, our representative was reminded of the control measures suggested for the information of growers. Strict control of the pests during the dormant period become effective in protecting the later crops and, as usual, prevention is a payable proposition.

Black Peach Aphid: This pest over-winters on the roots of the trees and therefore Winter spraying fails to reach them when they must be controlled by bands around the tree during August to prevent the Aphids climbing upwards to damage the trees. Another method used is to dig a channel in the soil around the tree trunk and apply waste tobacco stems or nicotine sulphur one part in 80 gals. water in the channel.

Green Peach Aphid: The most effective control is by ovicidal spraying applied as late as possible before bud movement. In some districts the spray is applied during the first two or three weeks in July, whilst in other districts this period may be delayed. The advantage of delaying the spraying as long as possible is so that egg-laying will be completed before the application of the spray but once the bud movement has commenced tar distillate spraying should be discontinued to prevent injury to the buds. Protection of the skin of the operator is advised in the use of lanoline smeared on the skin to prevent burning.

Indications this year in Victoria is that Green Peach Aphid may be severe in southern districts particularly and dessert Peach growers are advised to take precautions at this time of the year. A thorough ovicidal spraying is a much more effective and economic spray against Green Peach Aphid than subsequent spraying in Spring and Summer when the insects have begun to infest the leaves. Growers will appreciate the difficulty of effecting control of Green Peach Aphid on leaves once curling starts due to the feeding of the pests on the leaves.

Woolly Aphid: Last year there appeared to be an increase of this pest and the parasites did not become active until very late in the Summer. Growers in cool districts particularly where the parasites are not providing sufficient control can apply a red oil spray during the dormant period. Preferably the spray should be applied by a coarse jet or under high pressure to destroy the woolly covering which protects the insect. This oil spray will not seriously reduce the parasite population which during the Winter is sheltering in the dead bodies of their victim hosts.

A good practice recommended is the retention of those prunings which are carrying heavily parasitised Woolly Aphid, these prunings should be either placed in a receptacle near the trees or left at the base of the trees and allowed to remain until the parasites have emerged. The destruction of prunings containing parasites may materially deplete the parasite population, particularly in the early part of the season when control is most important.

Eggs of the Green Peach Aphid at the side of a bud on a Peach lateral.

San José Scale has increased in some Victorian districts as a result of wet Winter conditions last year interfering with the normal spray application for the control of the pest. One of the most effective sprays for this scale is lime sulphur 5 gals., Winter white oil 2 gals., and water 80 gals., applied while the tree is dormant. Where the infestation is heavy, two thorough sprayings may be necessary.

Mealy Bug: In cool districts this pest has been increasing, and in orchards where it is giving trouble the bark should be scraped from the trees and a Winter application of lime sulphur 1 to 10 should be made.

Orchard Hygiene: The removal of loose bark on Apple and Pear trees will help to destroy over - wintering larvae and pupae. The sterilising of cases by dipping in a boiling solution of 1 lb. washing soda to 20 gals. of water is recommended. Attention should be paid to props and rubbish on and around the trees. The destruction of chemical bands and the treatment of bag bands is also urged. For the control of Brown Moth the collection of all mummies hanging on the trees and the pruning of all infected twigs is advised. In both of the latter cases they should be burned, not buried.

SAN JOSE SCALE.

1. Pear branch showing the scale.
2. Female scale (magnified).
3. Scale ventral view.
4. Female and young (magnified).
5. A perfect insect (male).

(Illustrations by courtesy Victorian "Journal of Agriculture.")

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New South Wales: Lanes Ltd., 69 Abercrombie St., Sydney.
Queensland: A.C.F. and Shirleys Fertilizers Ltd., Brisbane.
South Australia: George Wills & Co. Ltd., Gilbert House, Gilbert Place, Adelaide.
Western Australia: F. H. Faulding & Co. Ltd., 313 Murray Street, Perth.

Works: PRAHRAN GROVE, ELSTERNWICK, VICTORIA — L 1468.

Winter Irrigation: In Victoria, continued dry weather has forced growers to consider the advisability of applying irrigation. Cover crops are affected if such conditions continue, and no doubt the trees will be affected. In past dry seasons it has been observed that a Winter irrigation has been beneficial to the trees.

In commenting upon Winter spraying for Green Peach Aphid a writer in the "N.S.W. Agricultural Notes" bears out the above suggestions as follows:—

In New South Wales, the Green Peach Aphid, in some seasons, becomes a serious pest of Peach trees on the northern and central tablelands, south-western slopes, Murrumbidgee Irrigation Areas, and, to a lesser extent, in the coastal areas. The trees are injured during the Spring and early Summer, and where the infestation is severe, the leaves and blossoms become distorted and shrivelled, while large numbers of the blossoms fail to set fruit.

Egg-laying occurs more generally in the colder districts. The eggs are minute, shining black, and are deposited on the Peach trees, mainly around the bases of the buds, by wingless egg-laying females during May and early June. These eggs hatch about the end of July or early August and minute wingless aphids appear. These remain on the trees, but do not increase in number to any extent until the buds burst, when they commence to develop rapidly. Enormous numbers of young are produced, and it is then that injury to the buds becomes evident. Winged generations are produced in the early Summer, and migration from the plants begins. The aphids live mainly on these hosts throughout the late Summer and Autumn, and in late Autumn winged forms fly back to the Peach trees, where the egg-laying females are produced.

A tar distillate spray applied to the trees **when they are completely dormant,** and after the last of the over-wintering eggs has been laid, will destroy the latter, thus preventing any hatching in the Spring. The time at which these sprays should be applied varies in different districts, but in the Irrigation Area the best time is from about the middle of June until towards the end of July.

Tar distillate at a dilution of 1 to 35 gives complete control. If a more concentrated solution than this is used on Peach trees, some injury to the buds may occur, even during complete dormancy.

PERSONAL.

Mr. T. Hewson, who was Marketing Supervisor to the N.S.W. Acquisition Committee, has since been appointed as manager and Chief Executive Officer to the State Apple and Pear Marketing Committee.

As the services of the Superintendent of Sydney Markets, **Mr. Willis J. Williams** have been taken over by the Navy Department; **Mr. E. S. Hills** had been appointed Acting Superintendent.

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LEAF CURL OF STONE FRUITS.

Spray Periods.

THE LEAF CURL disease of stone fruits, which must not be confused with the leaf curling that results from Aphid infestation, is readily controlled by spraying with a Bordeaux mixture 6-4-40, or lime sulphur 1 per cent. (approximately 1 gallon to 20 gallons of water in the case of commercial lime sulphur, or 1 in 14 in the case of home-made lime sulphur).

Time of Application.

The time of application is most important. The spray must be applied prior to bud burst, preferably whilst the blossom buds are swelling. Successful control is rarely obtained if the spray is applied after the leaf buds have burst. Every effort should be made to ensure that the spray reaches all portions of the tree and particularly the extremities of small limbs and twigs.

Bordeaux mixture has been found to be slightly more effective than lime sulphur under conditions which favor the development of the disease. It has the additional advantage of greater durability on the tree. Consequently, if the grower is obliged, because of other work, to spray some time in advance of bud swell, then Bordeaux mixture is to be preferred to lime sulphur. Should the grower use lime sulphur a few weeks before bud swell and showery weather occur, it would be essential to make another application of this spray at a fairly late stage of bud swell.

Lime sulphur, on the other hand, has the advantage that it controls certain scale insects, whereas Bordeaux mixture has rather the opposite effect.—("N.S.W. Ag. Gazette.")

POTASSIUM FOR FRUIT.

The importance of applying sulphate of potash to fruit trees has been demonstrated at the East Malling Research Station, according to Dr. T. Wallace. Twenty-five to 50 per cent. is suggested, according to the amount of potash available in the soil. Potash promotes the swelling of the cell colloides and this increases the water content. Lack of potash causes the drying up of the cells leading to leaf scorch in Apples. Potash improves the leaves and also helps in the development and growth of buds, and increases the number of shoots grown.

A liberal supply of potash raises the sugar content of the fruit and has a definite effect upon the setting of flowers. Apples absorb this element, however, with difficulty. Farmyard manure is quoted as a good thing, and helps the availability of the potash supply.

Apple and Pear Acquisition

CONFERENCE FAVORS ONE COMMONWEALTH MARKETING AUTHORITY FOR 1941 CROPS — BASIS SHOULD BE COSTS OF PRODUCTION — VARIETAL POOLS — COMPENSATION FOR RE-WORKING — FINANCING PRODUCTION AND HARVESTING COSTS.

AN IMPORTANT CONFERENCE on the subject of Apple and Pear Acquisition was held at Canberra early in July.

The Minister for Commerce (Hon. A. G. Cameron) presided in the early stages: subsequently the Assistant Minister (Senator J. McBride) occupied the chair. There were also in attendance the Secretary of the Department (Mr. F. J. Murphy) the Ministers for Agriculture from each State and delegates of growers and merchants from each State.

Delegates from a majority of the States favored acquisition for the 1941 crop. N.S. Wales strongly opposed acquisition.

Mr. Cameron supplied the following figures summarising the results so far of the 1940 scheme:—Assessed crop at start of season, 13,120,000 bushels of Apples, 1,672,040 bushels of Pears on the trees; qualified for Commonwealth advances, 9,561,000 bushels of Apples, 678,000 bushels of Pears; fruit sold to May 31 on the Australian fresh fruit market, 1,405,000 bushels of Apples, 280,000 bushels of Pears; fruit shipped overseas to May 31, 1,437,000 bushels of Apples, 126,000 bushels of Pears.

Mr. Cameron explained that unfavorable seasonal conditions during the growing season substantially reduced the quantity of fruit which reached commercial quality. "The prospects for the next season," he added, "are that the commercial crop will be considerably greater than for 1940, which was below normal. In addition, it may be anticipated that the quantity likely to be exported to the United Kingdom will be further reduced."

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Delegates from a majority of the States favored acquisition for the 1941 crop. N.S. Wales strongly opposed acquisition, thus incurring much criticism from the other States.

The details proved to be so intricate that the conference lasted four days.

A Committee comprising accredited representatives of the industry, members of the Marketing Committee of the Apple and Pear Board and State officers was appointed to prepare a report for submission to the Australian Agricultural Council.

The resolutions submitted by the Committee contained the fundamentals of a controlled scheme. They were as follow:—

1. That the principle be agreed to that the ownership of the fruit be vested in some central authority, subject to this conference evolving a scheme satisfactory to a majority of the States.

2. The basis of acquisition shall have regard to costs of production and shall take into consideration as far as practicable any special disabilities.

3. Varieties of Apples and Pears be classified into groups according to their respective commercial value.

4. The scheme of acquisition shall provide, firstly for an adequate payment for all Apples and Pears of approved quality, excluding only uncommercial varieties in respect of which compensation is provided, and secondly, for appropriate differentiation as between varietal group payments, but that no distinction be made against fruit qualified as to quality, but of which delivery is not required.

5. Out of funds to be provided by the Commonwealth Government, we urge that provision be made for the elimination or effectual re-working of trees of uncommercial varieties.

6. That the present Apple and Pear Marketing Committee be retained as the Federal authority to control the proposed acquisition scheme for 1940-41 season.

7. That provision for payments, or advances against such payments, be arranged for in such a manner as will permit of growers financing production and harvesting costs, and that a portion of such advances be arranged for at an appropriate rate per acre.

New South Wales dissented from the scheme as outlined by the Committee, and Queensland qualified its support. The New South Wales Minister for Agriculture (Mr. Reid) announced, however, that, if details of a scheme were sufficiently developed, he would be prepared to take it before growers and his Government for consideration. The difficulty with New South Wales, it was explained, was that its delegates had come to the conference with their hands tied.

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The position at the moment is that the Federal Government is giving careful attention to the whole position, and it is believed that a workable programme for the 1941 Apple and Pear crop will be devised.

From a careful perusal of the seven foregoing resolutions it will be observed that all major points are covered, including the vexed question of varietal pools.

While arguments for varietal pools were capably advanced, it was pointed out that this did not necessarily mean State varietal pools, but rather that these should be on a Commonwealth-wide basis.

For years past there has been steady re-working of varieties, growers realising the necessity for reducing the number of varieties down to those commercially profitable.

The problems arising out of war conditions have made this position acute, hence the inclusion of this subject in the recommendation made to the Government.

Victorian Growers Oppose Acquisition

Motions of Protest Carried

At a public meeting, attended by over 400 fruitgrowers, held in the Town Hall, Box Hill, on July 25, a resolution was unanimously carried that growers be given the opportunity to discuss with Government the acquisition of the 1941 crop before the scheme is again brought into operation.

The meeting was called by the Fruit Growers' Defence League and chaired by Mr. A. Bloom (Ringwood) in the absence of the President, who is in camp. The meeting opened with the singing of the National Anthem. The Chairman announced apologies from Mr. Hogan (Minister for Agriculture), Col. Knox and Mr. Everard, M.L.A., and others.

The Chairman explained that the meeting was designed to protest against the present marketing conditions for Apples and Pears and to insist that the acquisition of the 1941 crop be not enforced. The fruit industry does not want any financial assistance from Government, but it does want the right to market its fruit by its own efforts. The present acquisition scheme has not been carried out as was promised.

Mr. C. H. Honeybun (E. Doncaster) reported upon a conference to formulate plans for assistance to soldier orchardists while on defence duty so that their orchards would be cared for. It is hoped that voluntary workers in all fruit districts will become responsible for this valuable assistance.

In reporting upon the recent conference at Canberra, in which the League was not allowed official representation, he stated that the conference had been misinformed in a statement that Victoria favored the acquisition scheme. This was not so, since many large districts were totally opposed to the scheme.

He quoted figures purporting to prove that the Apple and Pear Board was not in the best interests of the industry and said that although the total assessment for 1940 had been made as 13,120,000 cases Apples and 1,672,000 cases Pears, the actual total deliveries had only reached 6,830,000 cases Apples and 677,000 cases Pears. This left over six million cases Apples to be consumed in the Commonwealth.

He stated that the operations of the Board has resulted in a cost to producers of £32,165 for administration and publicity, and £391,000 for cases, packing, storing, freight, etc. The return to the 12,000 growers in the Commonwealth up to May 31 represented only £808,000, including £361,000 to Tasmanian growers. A study of the position reveals that the average return to growers was therefore only £67 per grower, but the expenses of the Board inflicted a cost of £35 per grower to operate the so-called organised marketing system. He submitted that the elaborate organisation of the Board is unnecessary and too costly.

He claimed that at the outbreak of war the fruit industry decided to assist the Commonwealth all it could and so put certain proposals to Government of which no notice was taken. Therefore the industry has been forced to take steps to protect itself.

Mr. Sam Brown (Pakenham) stated that growers must accept the idea of the continuance of the Board, which will entail heavy expenses upon the grower irrespective of the kind of season experienced. He stated that under the present acquisition scheme growers were receiving only one halfpenny per lb. for Delicious Apples, while the public was paying around fivepence per lb. His district's representative to Canberra was an agent of the Board. The Board had proved its inability to efficiently handle the acquisition scheme.

— THE —
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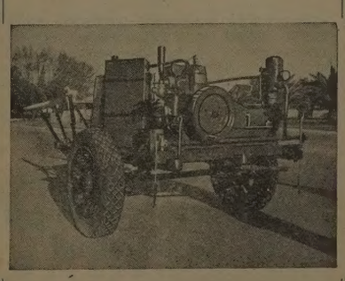
POWER SPRAYER



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Box Hill, E.11 Victoria

Mr. Gil Handasyde (Wantirna - Vermont) said that growers in his district were 100 per cent. opposed to acquisition. He believes that private enterprise can handle marketing better than any Board can, and growers demand the right to be left alone in their marketing.

Mrs. Serpell (Doncaster) stated that Boards take away man's rights to grow, use, give away or sell their own products. Experience has shown that the longer Boards run the worse mess they get in. At a recent conference of growers at which 16 branches of the League were represented, they were 100 per cent. against acquisition.

Mr. T. Barclay (Peninsula) stated that at four meetings in that area the majority of growers were opposed to acquisition, although the Peninsula had been quoted at Canberra as favoring the scheme.

Mr. J. Coleman (Ringwood) stated that although their growers had not agreed upon the form of an alternative scheme, they want the right to sell their own fruit. The Board had promised the public good fruit at a reasonable price, but the public has been forced to pay the highest average price on record and the Board has not opened up any new avenues of sale, but have closed many regular channels.

Mr. E. J. Crittenden (East Burwood) moved the following resolution, "That this meeting of growers re-affirms the previous decision for complete abolition of the acquisition scheme in respect of the 1941 crop owing to the desperate position of the industry." Seconded by Mr. H. S. Tainton and carried unanimously. The mover stated that the Board cannot handle gluts economically as greater administration costs are thereby incurred without a commensurate sales return. If the growers sold direct these costs would be cut down. In his opinion, even with the best brains on the Board, it cannot handle marketing as well as growers can.

Mr. Keith Smith (Diamond Valley), who is going into camp next week, said that at this time no one wants to embarrass the Government but growers had to protect themselves. His district was about 99 per cent. against acquisition.

Hon. G. L. Chandler, M.L.C., believed that if the Board had been State-controlled instead of Federal-controlled the poor results of the acquisition scheme would not have been so marked. There is no section of primary production that has asked less of Government than has the fruit industry. He believes that the fruit industry has had a raw deal. He advised growers to organise and become strong enough to carry weight as a combined body. Elect men who will truly represent primary-producer electors and then con-

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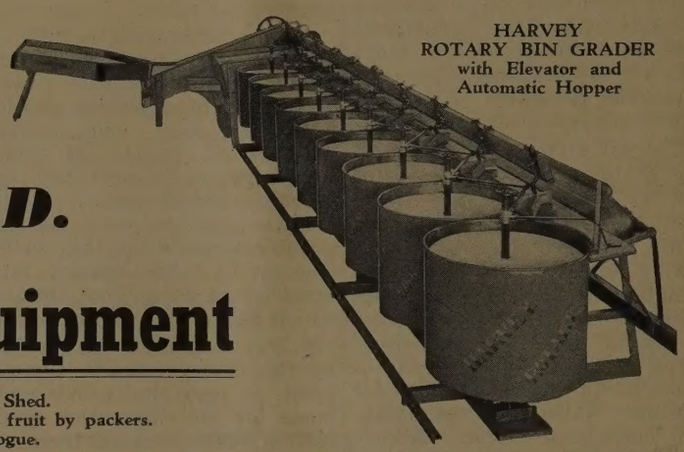

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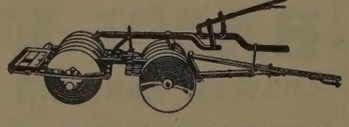

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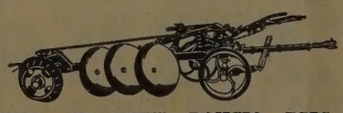
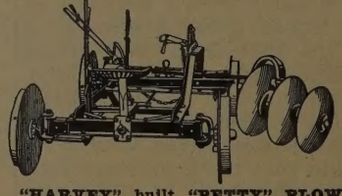
THE BEETLEBACK cuts out all hand working under citrus trees, and keeps the ground level. It lifts up the branches, cultivates under them, and gently replaces them on the ground.



THE "HARVEY" LANCIA DISC PLOW is designed specially for the hardest kind of plowing. Low overhead clearance for low overhanging trees. Can be racked over for both plowing close up to and away from the trees. Equipped with the famous **"HARVEY"** Power Lift or Screw Lifts which are operated from the seat of the Tractor.



"HARVEY" built "PETTY" PLOW: Plows out strips which have not been plowed for years. Cuts through couch grass with the greatest of ease. Also plows up to the trees and in the centre. **DISC CULTIVATING GANG** can be attached in place of Disc Plow Gang.

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tinue to organise until they can abolish the Board. The present Minister is Board-minded. Figures show that every Board brought in under the Marketing of Primary Products Act has been continued by a minority vote of producers.

He asked privilege to bring up the matter of excess water charges for orchardists and market growers whereby a charge of £13/12/6 per acre foot is made as against the charge at Werribee of 12/- per acre foot. A resolution was later carried that Cabinet be urged to revise excess water charges.

Mr. T. Rose (Vermont) moved that a deputation to the Premier be arranged to point out the serious position of growers brought about by the 1940 acquisition scheme and to state that if the scheme is continued in 1941 many growers will be forced to vacate their holdings. Seconded by Mr. A. J. Noble (Hastings) and carried with one dissent.

A collection taken up during the meeting resulted in over £20 being received towards the expenses of the League. A meeting of growers was announced to take place at Somerville on August 2.

U.S. HONOR TO AUSTRALIAN FOR RESEARCH WORK.

The degree of Dr. of Philosophy has been conferred upon Mr. F. T. Bowman, Research Officer of N.S.W. Department of Agriculture, by the Michigan State College for a thesis on the influence of early fruit removal on the growth, composition and blossom bud formation of alternate bearing Sugar Plums.

The author finds a practical value by thinning if done at the proper time, about a month after blossoming and two months before the first appearance, under the microscope, of blossom primordia. Dr. Bowman, who is a member of the Australian Institute of Agricultural Science gained honors and scholarships at Hawkesbury Agricultural College before joining the N.S.W. Department, and later the Ben Fuller Travelling Scholarship allowing him to continue his studies abroad, when he received his M.Sc. degree, in California. This is an added honor in being the first Doctorate for Horticultural work from an American University.

CLOSED ITALIAN SHOPS.

State Buys Fruit.

To save the total loss of fruit in 140 Italian shops closed by the Commonwealth Government, the N.S.W. State Government stepped in and bought all fresh fruit at a fair valuation, distributing it to hospitals in the metropolitan area around Sydney. The owners accepted the valuation placed upon the fruit.

New South Wales News and Notes

Murrumbidgee Irrigation Areas

WEATHER AND IRRIGATION — SUBSTITUTE CROPS — CITRUS IN U.S.A. — MANURES — CITRUS CROPS — FIELD DAY AT LEETON — CITRUS STOCKS.

(From Our Correspondent.)

THE WEATHER during the past month has been very severe on the citrus orchards, and the promised Winter irrigation was eagerly looked for by those growers who had missed out the last rotation of the season, in the fear that a wet Winter might occur.

Although the supply of irrigation was somewhat delayed by the fact that the Water Commission had to make a detour canal round certain work which was in construction in order to supply the growers, yet every effort was made by that body to complete the necessary arrangements so that as little delay as possible would occur.

Some portions of the Area have suffered more than others, and the severe frosts experienced have picked out the special "pockets" which have in previous years suffered severely.

Substitute Crops

It is obvious that after several years in succession of frosts cutting the citrus crops in these parts, some other planting will have to be substituted if the growers are to make a living, and in some special cases a complete reconstruction of their holdings may be necessary.

Where the land was fairly moist the damage does not seem to have been so great as where there was a fair cover of green crop, and probably the trees had to contend with this element as well as the drying out effect of the weather conditions.

On several occasions the weather has become overcast, and the hopes of growers revived with the expectation of a good rainfall, but only a few points fell, and the latest seasonal change last week only resulted in about 20 points, which, although it may have kept off the frost for a night or two, has done no real good.

Green crops of tick beans have proved almost a failure this season, but some crops of purple vetch were still holding out well when recently inspected, and with irrigation this crop will readily respond and probably give a good yield.

U.S.A. Citrus Methods

During the past month Mr. R. J. Benton, Special Citrus Instructor, visited the Area, and after his experience and investigations into the citrus industry in the United States, from which country he returned a few months ago, he was able to give very interesting and informative addresses to growers, both at Leeton and Griffith, and his lecture was attentively listened to by good audiences at both places.

The cultural conditions appertaining in U.S.A. were particularly interesting, and Mr. Benton informed his hearers that very little cultivation was done in some of the centres he visited. The lecture was copiously illustrated with some excellent pictures from the projector, and views of citrus orchards of many types were shown.

Much of the information given by Mr. Benton might with advantage be tried out here, as there are marked instances on some farms where the growers have kept their land too well cultivated, and without growing green crops the land has become consolidated and the penetration of the irrigation water has become difficult.

Ploughing in a Spring crop.

Manures

Sheep, stable and fowl manure is being used each year in greater quantities, and, incidentally, is becoming more difficult to obtain, and it may become necessary to make use of the large quantity of rice straw which should be available throughout the area, to make compost heaps which could, after being well rotted, be spread over the land.

Some years ago one grower spread the new season's rice straw all over the surface of his citrus block, but the careless dropping of a match resulted in a disastrous fire running through his land, and this danger would be avoided if the straw could be well rotted in a heap before being spread.

On one farm in the Stanbridge area the writer noticed a very marked improvement on a patch of heavy soil, where a large quantity of rotten oat straw had been ploughed into the land, and although the straw of rice is far tougher, yet there must be some means of utilizing the great quantities of this variety which are to be seen every season either rotting in the paddocks or which is burnt.

Humus of any kind is valuable, and the soils of these areas are inclined to consolidate unless green crops, or organic manures are used in conjunction with sulph. of ammonia.

Citrus Crops

In spite of the weather conditions, citrus crops are in many cases in excellent condition, and many growers picked their Lemon crops some time ago. The market for this type of fruit has been exceptionally good and high prices have been realised for fruit exported to New Zealand, while prices for factory fruit have been far better than for some years past. Grapefruit is this season showing up very well for quality and far exceeds the quality of fruit of this type last season.

The heavy rains last Winter caused a heavy falling in Grapefruit, and large quantities were

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is an ideal shelter tree, being densely branched to the ground. On the boundaries of ORCHARDS a belt of one line of pines is a great protection in exposed situations.

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(All soils are deficient in available Nitrogen during the early Spring.)

It is the cheapest NITROGEN.
(Compare its cost per 1 per cent. of Nitrogen with any other form.)

It is immediately available.
(And yet is not washed away by rain water.)

2-3 lbs per tree, *no later than September*
(Costing not more than about 4 pence per tree).

THERE COULD BE NO BETTER INVESTMENT.

H15/34

rushed into the sheds, but this year the fruit is hanging well, and will probably be marketed over a longer period with more satisfactory results to the growers.

Buildings and Equipment

The installation of the newest type of fruit grader is one of the many improvements effected this season in the Griffith Producers' packing shed, and this latest type of machine, made to the special specifications given by the Producers' shed manager, by Messrs. W. Brown and Sons, of Lidcombe, is expected to greatly facilitate the handling of the Orange crop, and the directors of the company are greatly impressed with the possibilities of this grader. Nearly £10,000 has been spent during the past six months in improvements to the buildings and sheds of this company, and new buildings of a substantial and imposing type have been erected on the additional land which was acquired from the Irrigation Commission.

The new cool store with a capacity of 12,000 cases was ready in time to handle the Peach crop in February last, and a large tonnage was handled. The new road which was constructed greatly facilitated the traffic, and prevented the clashing of fresh fruit for market and that delivered for the cannery. Every year sees some progressive effort on this company's part, and the shareholders are showing their confidence in the management by increasing their share holdings.

Win the War Rally

Great activity has been shown in both the Leeton and Griffith areas in the "Win the War Rally," and it is expected that on the day selected for the great effort (July 27) that the response will be of a very substantial nature. Already large sums have been raised by various Committees of such institutions as the Jondaryan Club, which has raised £1,000 already toward the presentation of an ambulance, and hopes to have funds in hand shortly to complete another.

The Ladies' Guilds and Red Cross workers are always busy making socks and other comforts for the troops, and at Leeton it is proposed to hold a big Market Day on August 14, when numbers of sheep, pigs and poultry, all of which have been donated, will be sold by auction.

The response with volunteers for the A.I.F. from both Leeton and Griffith has been very satisfactory, and a fine body of men will represent these Areas wherever they may be sent.

The R.S.S.I. League are also doing their part in fitting themselves for service when required, and regular parades for drill and instruction are held, well attended, and under the instruction of Segt. Tilden, a particularly efficient and able officer, the "Old Brigade" are making rapid progress with the new type of drill.

Field Day

On Friday, June 21, a very interesting field day was held at the Leeton Research Station. Mr. R. J. Benton, Special Citrus Instructor, was in attendance and explained to an interested audience of growers the object of the experiments, while Mr. C. Horth, the Officer in charge of the orchard, further dilated on the conclusions obtained therefrom.

One of the most interesting portions of this farm is the experiment plot of various citrus stock trials which are being carried out.

Citrus Stocks

Rough Lemon, Seville Orange, Sweet Orange and Trifolia stocks are all being tried out with scions of Washington Navel, Valencia, Lisbon and Eureka Lemons and Grapefruit. The comparisons are of an extremely interesting nature, and will be of undoubted value to growers.

Other stocks than those mentioned are to be tried out, and although it may take some years to definitely ascertain the affinity between some stocks and the various scions used, some already show a decided lack of such affinity and are dwarfed and unthrifty.

In the past many citrus groves have been planted on soil totally unsuitable for their culture, and even on the rough Lemon stock, which, up to the present, has given the most satisfactory results of any used, trees worked on this stock have declined badly where the soil and drainage conditions were unsuitable.

The Grapefruit seems to do particularly well on the Sour Orange stock, and worked on trifoliata stock gives a particularly fine quality fruit, although not making as strong growth as on the sour or Seville roots. The whole problem is one of intense interest, and the work being done under the able supervision of Mr. Horth and Mr. Benton, will be followed keenly by the interested growers of both ends of the Area.

The Trifoliata stock is said to have a dwarfing effect on some varieties of citrus fruits, but some Valencias worked on this stock on a farm at Griffith have done very well, and commenced bearing at a far earlier age than on the rough Lemon, in fact they really bore at too young an age, and the fruit had to be removed in the earlier years, but the trees have grown strongly and the quality of the fruit is exceptionally fine.

Probably the best citrus holdings on these Areas are in the Stanbridge portion, where the soil is a deep grey sandy loam with a fine drainage, and some exceptionally good groves are to be seen, while the homes which have been built on the farms give evidence of the owner's faith in the continuance of the trees to produce.

NEW SOUTH WALES NEWS AND NOTES—(Continued)

Apple Week in Sydney

Highly Successful Effort — July 29 to August 3

Value of Sturmer Pippin Emphasised

IN OFFICIALLY OPENING Sydney's Apple Week on July 29, the Hon. A. G. Cameron (Minister for Commerce), expressed appreciation to those shopkeepers who had made window space available for the handsome baskets of Apples as supplied by the N.S.W. Apple and Pear Publicity Committee.

There were 12 full window displays by important shops of the type of Anthony Hordern's, Grace Bros., etc. Altogether, 400 beautifully decorated baskets were on view in 150 Sydney shops. The effect was most pleasing. Sturmers were specialised, but other varieties were included such as Democrat, Crofton, Granny Smith and French Crab.

The programme included daily demonstrations of Apple cookery by the Electricity undertaking and the Gas Light Co. The latter conducted an Apple tart competition, limited to the use of Sturmers only — this variety being in heavy supply in Sydney. In fact, it might be said that this was "Sturmer Week."

The co-operation of the British Medical Association and the Dental Association of Australia was secured. Doctors and dentists gave broadcasts over national stations daily by courtesy of the Broadcasting Commission of Australia.

Prof. Harvey Sutton, in charge of the Dept. of Health and Tropical Medicine (Sydney University), gave the luncheon address at the Rotary Club on July 30, on the subject "Agriculture and Health," in which stress was laid on the nutritive value of natural products, Apples being specially mentioned.

There were distributions of Apples daily to schools, hospitals and kindergartens when children were addressed on the subject of Apples and health. The Apple and Pear Board visual education film was used in addresses before women's organisations and city clubs.

Arrangements were made with Domestic Science Schools in various parts of N.S.W. for Apple cookery demonstrations. Thousands of recipe books were distributed.

Fruit wholesalers and retailers heartily co-operated in the publicity work. Shopkeepers displayed variety cards, also window strips tell the public that this is "Apple Time," that Sturmers should be bought freely and that the smaller sizes were crisp and full flavored. A specially designed window card was also on view showing a cheerful Sturmer with a twinkle in his eye, and saying to the public "I am a Sturmer Pippin, I taste better than I look: try me."

In Sydney's Apple Week the Publicity Committee rendered valued service. The arrangements by the Board's Publicity Officer were supervised by Mr. J. Holmes (Chairman), Mr. P. S. Macdermott (Hon. Sec.), and Mr. W. Musgrove. Mr. L. Jenkins arranged for the Rotary Luncheon address. Mr. T. Hewson secured the cheerful "Sturmer" design, the drawing being made by his son, who is a trained artist. Mr. F. Chilton and Mr. Pogson distributed publicity material to retailers. Mr. H. McKay (Tasmanian Government Marketing Officer), and Mr. A. C. Ward, addressed scholars at State schools.

Mr. J. R. Abel, a member of the Tasmanian State Fruit Board, who was in Sydney at the time, also Mr. L. Pearce, Fruitgrowers' Federation of N.S.W., took an interest in the proceedings.

The general effect was a stimulation of the sale of Apples and it is hoped that many shops will keep the baskets of Apples in their windows for months to come.

APPLE PUBLICITY IN N.S.W.

Willing Helpers in Apple Distributions to Schools

The value of educational publicity among school children regarding Apples for health is fully appreciated by the N.S.W. Apple Publicity Committee.

In co-operation with the Education Department, Apples are regularly distributed at State and denominational schools, when addresses on the health value of Apples are given by a team of speakers, including Messrs. A. C. Ward, L. J. Jenkins, H. Woodward, P. S. Macdermott, H. McKay, E. E. Herrod, G. Pogson, L. T. Pearce, S. Milne, K. Turnbull, J. Holmes, Keith Holmes, T. Hewson, W. Musgrove.

By having several speakers available it is possible for the various grades at schools to be addressed separately. Much enthusiasm is displayed by all helpers, and work of constructive value is being capably done. Mr. A. C. Ward has displayed special adaptation in addressing the tiny tots.

STRAWBERRY IMPROVEMENT IN N.S.W.

FROM the recent investigations made by Dr. Magee, of the Biology Branch of the N.S.W. Department of Agriculture, it is now certain that the trouble responsible for the decline in the metropolitan Strawberry industry previously thought to be due to a complex of root rot diseases, is due to a virus disease known as "crinkle." This disease is generally manifested first in a mosaic patterning or crinkling of the leaves, accompanied sooner or later by a marked loss of the root system and subsequent death of the plants.

As with many virus diseases of this type, better health of the plants may be maintained by heavy fertilisation and warmth which promote the development of new root growth, but isolation and rogueing of infected plants to prevent the further spread of the disease as much as possible are also necessary.

The metropolitan Strawberry industry can only be properly re-established by the use of healthy propagating material produced in isolation and an attempt is now being made at Hawkesbury Agricultural College under Dr. Magee's supervision to raise fundamental stocks of such material.

It is very doubtful whether the present day varieties can survive much longer for most stocks of these varieties are more or less infected with the virus. Since the disease is not transmitted through the seed, the best plan for the successful rehabilitation of the Strawberry industry appears to be the raising of new seedling varieties in areas isolated from diseased fields. Progress is being made by Mr. Shirlow, Plant Breeder at Hawkesbury Agricultural College, in the development of such new varieties. Two seedlings of Fendalcino x Sovereign and one Fendalcino seedling of unknown male parentage, offer most promise in this field at present.

Mr. Shirlow has also under observation a large collection of varieties of Strawberries and allied species of Fragaria at Hawkesbury Agricultural College.

It is not yet certain, however, whether those varieties and species which have remained free from manifestation of virus infection are really resistant to the disease.

Risky.

The judge addressed the prisoner: "Was any other person with you in this? Did you commit the robbery quite alone?"

"Quite alone, my lord," was the reply. "The trouble about having a partner in an affair like this is that you can never tell whether he is honest or not."

FRUIT TREES

ALMONDS, APPLES, PEACHES, APRICOTS, PLUMS, QUINCES, etc., in best sorts.

Extra strong trees 1/6 each, 15/- doz. Usual size 1/3 each, 12/- doz., 80/- per 100.

WALNUTS, CHESTNUTS, FILBERTS, CAPE CHESTNUT, CAROB TREES, 2/- each.

GRAPE VINES, 9/- doz., 50/- 100.

GOOSEBERRIES, LOGANBERRIES, CURRANTS, 6/- doz., 30/- 100.

STRAWBERRIES, 3/- 100, 16/- 1,000.

RASPBERRIES, 1/6 doz., 9/- 100.

ROSES.

Choice: 1/3 each, 12/- dozen.
Standards, 2/7 each, 30/- doz.

Maples, Genistas, Cotoneasters, Ash, Oaks, Elms, Poplars, and big variety of shrubs and trees, 1/6 to 4/- each, according to size and kind.

Gladiolus Corms, good mixed, 1/6 doz., 9/- 100, 60/- 1,000. Special named Glads, 3/- doz., £1 100.

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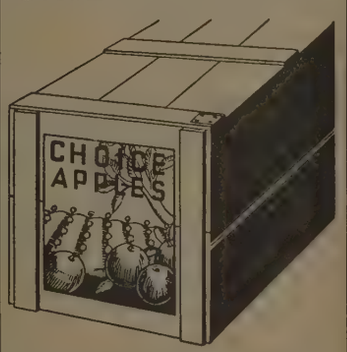

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Supplies obtainable from hardware, paint and other stores.

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Supplement Your Income By

Growing Tomatoes

Plants of the following varieties now available:—

HUTCHINSON'S SPECIAL IMPROVED LARGE RED: A prolific cropper, unequalled for marketing. **200 8/-; 1,000 30/-.**

We also sell and recommend the following varieties: Burbank Improved (the earliest Tomato in the world); South Australian Red; Burwood Wonder; Wilding's Prolific; Velocity; Large Red, Yellow Top; Orange Prolific; Earliana; John Baer.

Prices: 200 6/-; 1,000 25/-.

No Orders Under 200 Supplied.

All our plants are growing in new cases, each case containing 200 plants; thoroughly hardened and ready for planting in the open.

Special Price for Larger Quantities.

Terms.—Strictly cash with order. Freight must be added for prepaid stations. Exchange must be added to all country cheques.

Thos. H. Hutchinson

Wholesale Nurseryman,
North Rd., Bentleigh, S.E.14, Vic.
Phone: XU 1336.

New Mandarin Seedling from Queensland

We have pleasure in announcing the introduction of A NEW MANDARIN, which is a seedling of the Emperor variety, with a **Distinct Grapefruit Flavour.** The habit of growth is strong and large leaved, not like the ordinary Mandarin foliage. This is very similar to the Orange and the tree is ABSOLUTELY THORNLESS and is a THIN SKINNED VARIETY.

Fruit Picked From Trees Last Year Weighed up to 16 ozs.

This new Mandarin, which is a rather late variety, should be a distinct acquisition.

Beautiful strong plants ready NOW, 10/6 each.

Packing and freight for Queensland, 1/6 extra; Interstate, 2/6 extra.

Limited Stock only available from:

THOS. PERROTT

(Incorporating
Petersen Bros. & Craig Pty.)

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Brisbane, Queensland

DRIED FRUIT QUOTAS.

THE Secretary of the Consultative Committee of the State Dried Fruits Boards (Mr. W. N. Twiss) stated to-day that the Dried Fruits Boards of the producing States had approved of the Committee's recommendation for revised Home Consumption Quotas for 1940 season's dried fruit. These were:—Currants, 15 per cent.; Sultanas, 14 per cent.; Lexias, 45 per cent.; Prunes, 100 per cent.; Peaches, 95 per cent.; Apricots, 90 per cent.; Nectarines, 100 per cent.; Pears, 50 per cent.

The existing quotas for Sultanas and Apricots remain unaltered, those for Currants have been increased from 14 per cent., Lexias from 40 per cent., Prunes from 90 per cent., Peaches from 60 per cent., and Nectarines and Pears from 70 per cent. and 40 per cent. respectively.

The figures before the Consultative Committee supplying the latest pack estimate for the season indicated that the Commonwealth market was able to absorb the whole of the Prune and Nectarine production—hence 100 per cent. was recommended in these varieties.

In respect to Western Australia, the increased quotas apply to Currants and Lexias only. A special arrangement is in operation in regard to the exportable surplus of Western Australian Sultanas owing to the limited production of this variety and dried tree fruits are not produced commercially in that State.

DRIED FRUITS TO BRITAIN.

Other Exports Increase.

This year will create another record crop of dried vine fruits in Australia, and 94,000 tons is the estimate comprising 61,500 tons Sultanas, 24,500 tons Currants, and 8,000 tons Lexias.

Under a contract made with the British Government last March, 26,000 tons have already been shipped to the United Kingdom. Now a further contract has been entered into by which Britain will take the balance of surplus stocks representing approximately 15,000 tons Sultanas and 10,000 tons Currants, making a total for 1940 of 51,000 tons.

The price per ton sterling delivered into warehouses in Britain are: Currants 1-crown £26, 2-crown £28, 3-crown £31, 4-crown £35; Sultanas (first contract) 1-crown £31, 2-crown £35, 3-crown £39, 4-crown £42, 5-crown £45, (second contract) crown graded at a flat rate of £30; Lexias, 4-crown £38 and 5-crown £45; seeded Lexias, 1 lb. cartons 6/- doz., and 12 oz. cartons 4/9 doz.

Canadian orders total 19,063 tons to date, as against 1937 previous record of 17,133 tons. New Zealand 4,761 tons to date as against 1937 previous record of 4,533 tons.

W.A. DRIED FRUITS.

The latest estimate of the 1940 season in Western Australia was quoted at the May meeting of the Dried Fruits Board as Currants 3,005 tons, Sultanas 436 tons, and Lexias 274 tons.

At the July meeting, the Board will consider Shed Door Regulations, and packers have been invited to submit comments upon the proposed Regulations before July 12.

Owing to accumulated stocks, Government is being approached to consider the lifting of restrictions upon the sale of fruit for distillery purposes.

SOIL FERTILITY IS YOUR CAPITAL STOCK

YOU DRAW A CHEQUE UPON YOUR **SOIL BANK** EVERY TIME A CROP IS HARVESTED

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GUARANTEE THE CREDIT OF YOUR BANKING ACCOUNT *by using*

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Goulburn Valley (Victoria) News and Notes

MORE RAIN NEEDED — CO-OPERATION AMONGST FRUITGROWERS — PETROL RATIONING — CONTROL OF ORCHARD PESTS.

(By Our Correspondent.)

A WELCOME break in the weather occurred in the second week in July, when 1½ inches of rain was recorded, which refreshed crops and pastures, but more heavy soaking rains are urgently needed to make the season assured. After the long dry spell water storages are dangerously low, as was revealed at the irrigators meeting recently held at Tatura.

Orchardists in the Goulburn Valley are extremely busy—pruning operations have not yet been completed, **and the busy spraying season has already commenced, for during the present month Peach orchards have been thoroughly sprayed with tar distillate to destroy eggs of the Green Peach Aphis.** This is a most important spray, and should be done thoroughly, as many growers had heavy losses last year from this pest through failing to put the tar distillate on the trees.

There are promises of fair average crops of fruit in the Goulburn Valley for the coming season; buds in Peaches and Apricots are starting to move rapidly, and Almonds are almost in bloom, with signs of an early Spring.

The planting of fruit trees on the property of Messrs. Turnbull Bros. and Young at Cobram has already commenced. It is stated that 230 acres of Peaches and 30 acres of Apricots will be planted this year. It is also the intention of the owners to eventually plant 50 acres of Lemons on the sandy portion of the property which overlooks the Murray River.

Several instances of co-operation among orchardists for the pruning of their trees have been heard of lately. Pruning in many cases has become behind schedule owing to labour shortage, but no cases of real hardship have been reported so far, owing to the spirit which exists between members of the industry. Men whose employees have enlisted for active service have carried on as best they can, and when neighbouring orchardists have completed their work they have assisted. Realising the importance of getting this work done, it is pleasing to hear it is being overcome satisfactorily, but equally, if not more difficult conditions will be found when the busy spraying season is in full swing.

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There was an impressive scene at a church parade which was held in Shepparton recently, when, in the presence of 1,000 people, the unique and impressive ceremony of Unfurling the Blue Ensign and handing on the Torch from the Diggers of the old A.I.F. to the new A.I.F. and then finally back to the Mayor of Shepparton for its safe custody until their return from the conflict. 700 men from the Shepparton A.I.F. provided a fine spectacle marching in to the grounds. Mr. John McEwen, Minister for External Affairs, was the chief speaker at the afternoon gathering.

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Petrol Rationing at Shepparton.

Nearly 100 fruitgrowers attended a meeting in the Shepparton East Hall on July 26 to hear Mr. A. J. Fraser, Chairman of the Transport Control Board, outline the proposed petrol rationing scheme, which will come into operation from September 1.

The President of the Shepparton Fruit Growers' Association, Mr. N. W. Fairless, occupied the chair, and stated that organisations invited to attend included the Chamber of Commerce Agricultural Society, Borough and Shire Councillors, North Shepparton Dairymen's Association, Tomato Growers' Associations, and the Northern Victoria Fruit Growers' Association.

In the course of his address to the meeting Mr. Fraser said that if each industry could show that it was using petrol economically and efficiently, there was little danger of their self-imposed arrangement being disturbed. If the various industries would not organise themselves, however, primary producers would probably find themselves allotted the bare basic ration.

Mr. Fairless gave an undertaking that his industry would endeavour to work on the lines suggested in an effort to affect a reduction in the gross petrol consumption used in the fruit industry.

Mr. J. G. B. McDonald, M.L.A., suggested that primary producers should be encouraged to establish large underground storage tanks. This would decentralise supplies in the event of an invasion, and would also assist farmers in procuring petrol at wholesale rates and would relieve the distributing problems of oil companies.

At the conclusion of the meeting Mr. W. Young, President of the Northern Victoria Association, moved a hearty vote of thanks to Mr. Fraser, which was seconded by Mr. A. Dobson.

Control of Orchard Pests

Recommendations by Advisory Committee

AT a meeting of the Shepparton Fruit Growers Advisory Committee held during July it was decided to issue the following information for the guidance of fruitgrowers.

Apricots: For the control of **Shot Hole** two Bordeaux sprays should be applied, the first to be completed by the middle of July and the second spraying at the pink bud stage. Owing to the favorable conditions for the development of fungus diseases it is strongly recommended that this full programme be carried out.

Peaches: There are indications of the probability of a serious infestation of Green Peach Aphis, and it is strongly recommended that **all Peach trees** be sprayed with tar distillate. The greatest care must be taken to see that all tips of branches are sprayed, as sufficient eggs may be left on a single twig to re-infest the whole tree. This spray should be applied from July 14 and finalised not later than July 27.

Black Peach Aphis: All trees affected with Black Peach Aphis should be attended to immediately with a spray of nicotine and soft soap. It has been found that a method of control of this pest that is beneficial is the encircling of the butt of the tree at ground level with fresh tobacco waste.

Springtime is a busy period in the orchard.

Goulburn Valley (Vic.) News and Notes (*Continued*)

Pears—Codling Moth: The Committee urges that all chemical bandages be removed and destroyed, and bag bandages be examined and all grubs destroyed. All loose bark should be scraped off and forks of trees cleaned out and all hibernating grubs destroyed. All rubbish around the butts of the trees should be removed.

When pruning, be sure to saw off all broken ends of the branches which may harbor grubs.

Special attention should be given to Quince trees.

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Apricot Brown Rot

Ardmona Investigations

WORK on Apricot Brown Rot investigation has been conducted over the past two years on a block situated at Mr. H. E. Pickworth's orchard, Ardmona. The object of the work was to develop a spray schedule, which would control Brown Rot, Blossom Blight, and fruit infection, and which at the same time was non-injurious to the tree or the canned product. The usual sanitary practices were adopted in an attempt to reduce as far as possible the Brown Rot fungus from over wintering.

The weather conditions over the last two seasons were unfavorable for the development of Brown Rot, and consequently the experimental spray schedule tested could not be evaluated for its controlling effect on the disease. Conditions, however, were favorable for spray injury, and some useful information was obtained, particularly with regard to the effect of fruit cover sprays in foliage and fruit. This work has demonstrated the inadvisability of using sulphur containing cover sprays on Apricots under Goulburn Valley conditions.

The danger of this practice has been known for some years, but it was not until these experiments were conducted that it was shown that dry lime mix sulphur could cause serious injury to Apricots.

It was also shown that the use of Bordeaux mixture cover sprays at above a quarter strength can cause injury to foliage and fruit, while it is not yet certain that even a quarter strength Bordeaux spray is a safe spray in all seasons.

This also applies to other copper containing sprays (copper oxychlori and cuprous oxide) which are not consistently safe where they are applied at strengths equivalent to a quarter strength Bordeaux.

So far canning trials with sprayed fruits have not revealed any unsatisfactory conditions such as can blowing, deposits on metal, or in the syrup, or flavor effect.

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A meeting of the Ardmona Fruit Growers' Association was held last Friday night, to discuss the problem of Italian workmen in the orchards.

The view of the Australian workmen was also under discussion before recommendations were made.

The meeting recommended that no fresh Italians be employed on the orchards, and that the services of those now in employment should be dispensed with at an early date.

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IRRIGATORS MEET AT TATURA.

Storage Position Serious.

A COMBINED meeting of the Advisory Boards of the Shepparton and Rodney irrigation districts was held in the Tatura Mechanics' Hall to elect an Advisory Board for 1940-1941. The Chairman was Mr. S. R. Thompson; there were 200 present. The representatives were: — Graziers: Messrs. T. Davies and W. R. Bray. Dairymen: Messrs. G. Anderson and A. Wilson. Orchardists: Messrs. J. D. Simson and W. E. Cooper. Soldier Representative: Mr. J. Heslop.

Irrigators discussed the storage position with the Water Commission officials. It was revealed that if the dry spell continued there would be only sufficient water to deliver 50 per cent of the water rights.

The meeting decided if there was no real break in the weather irrigation should commence on August 1.

The District Engineer of the Commission (Mr. H. F. Byham) said that the excellent rain of Tuesday night was likely to delay the start of the season. Now that the break had come it was to be hoped it would continue.

Mr. E. P. Kendall, Divisional Engineer, also addressed the meeting. He gave the position of the storages and river flow, and said that unless weather conditions changed the Commission will be unable to supply the 1940-1941 water rights.

Pave the way for a crop of perfect fruit by spraying thoroughly with Shellicide "D" — NOW — and keep trees healthy, clean and free from insect pests.

Shellicide "D" is a modern paste-type spraying oil recommended for use—even with the hardest water — in combination with Bordeaux or Lime Sulphur up to the pink tip stage. Cut your costs and improve your control of both Black Spot and Red Spider with these dual purpose combination sprays.

SHELLICIDE "D"

The Shell Company of Australia Limited (Incorporated in Great Britain)

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Victorian News—(*Continued*)

Tatura Research Orchard

Lack of Finance Disability

That the limitation of expenditure to £1,500 made it difficult to proceed with efficient productive research at the Tatura Horticultural Research Orchard was a criticism expressed in the annual report of the Northern Victoria Fruitgrowers' Association.

The report stated that since last year, no further plantings of trees have been made at the Horticultural Research Station at Tatura. The three blocks already established made particularly good growth during the past season, although a considerable setback was experienced in the Peach block reserved for irrigation experiments by the loss of trees during the Winter. The Station, in common with most other orchards in the Goulburn Valley suffered during the past excessively wet Winter, and despite precautions taken to ensure good surface drainage, some 110 Golden Queen Peach trees died. These trees will be replaced this Winter and a special endeavour made to accelerate their growth so that variability throughout this block will be minimised.

In the endeavour to build up the soil fertility on the unplanted area of the Station, a scheme of improvement has been commenced. To date some 28 acres have been ploughed up, graded, check-banked, and sown with Subterranean Clover. It is proposed to extend this work in the ensuing year and as finance permits. This crop will improve the nitrogen status of the soil, will enable the block to be treated uniformly and at the same time will provide a small return from agistment grazing.

Experimental work proper is still limited because of the small technical staff available, but has proceeded as follows:—

(1) Fruit and tree growth studies of established trees on orchards near the Station were continued. These measurements are designed to give some indication of the relationship between irrigation, tree growth, and cropping. They will be of considerable value in application to experiments on the Station later on. The co-operation of certain growers in this work is much appreciated.

(2) Irrigation and soil moisture studies over a range of soil types on the Station and in the district were continued. Soakage rates on varied types of soil were compared with the aid of a special unit in which a standard soakage area is used. Observations on the rate of soakage along furrows and the uniformity of furrow irrigation were made.

During the Summer irrigation season, weekly sets of soil samples to a depth of 3 ft. on one soil type at the Station and on a nearby orchard were taken and analysed for moisture. This work is designed to get an idea of the depth at which roots obtain their water supplies, and also the order in which the various depths are utilised.

(3) Pear Rootstocks: The past season has been a poor one from a nursery point of view, and only a few extra seedling Pear rootstocks were raised. The existing collection of seedling Pear stocks was budded this Autumn, and it is proposed to use these stocks as a basis for a comprehensive field trial commencing in 1941. Very little success was achieved with vegetable propagation of existing stocks and stock types.

(4) Peach Selection and Hybridisation: It has been possible to reject a large number of the promiscuously fertilised seedlings originally planted for selection purposes. Further observations on the remaining trees will be necessary before the value of the more promising of these seedlings can be assessed. Artificial crossing between selected parents was carried out on much the same scale as in 1938-39. This work is likely to be productive of early results, but each cross occupies much time, and, in consequence, the volume of work is limited by the staff available.

No changes or additions to the technical staff were made during the year, but some changes occurred amongst the laboring staff of three, as two laborers have joined up with the 2nd A.I.F.

The progress of all lines of research in hand is being hindered seriously by the lack of technical staff.

A team is necessary for efficient productive research, but, at present, no such team is available, nor is the nucleus of a team for future work being built up.

Staff deficiencies are linked up with the problem of finance. The limitation of expenses at Tatura to £1,500 per annum makes it impossible to finance items such as—

(a) increased staff,
(b) the erection of buildings to accommodate implements, manures, spray materials, nursery materials, etc.,
(c) apparatus necessary for field experiments,
(d) essential laboratory facilities.

Some provision to meet these requirements is urgent and imperative. At present no facilities or shed room are available to handle the small amount of fruit it is estimated will be harvested next year. The present is not altogether an opportune time to approach the Government for extra money, but such will have to be provided from some source or other.

At present a sum of £224 annually is being paid to the Lands Department as part of the capital payment on the property.

A busy pruning scene in an Apple orchard.

DRY CONDITIONS AT DOOKIE.

The Principal of Dookie Agricultural College (Mr. G. B. Woodgate, B.A., Dip.Ed.), in his report to the Council of Agricultural Education for the month of June, reports that there has been no rainfall of real importance during the month, though showers have aggregated 71 points, bringing the total for the year to 491 points. The total for the corresponding period last year was 2,276 points, while the average for the period over nearly sixty years is approximately 10½ inches. The average annual rainfall at this College is 21½ inches, so that up to date less than one quarter the average has been received.

CANNED WILD PLUMS.

Good for Jellies.

A new development in canned fruit varieties is reported from Oregon, U.S.A. Tests are being made to can wild Plums which grow profusely in that State. The fruit is reported to make good jellies of a most popular taste. Experiments are to be made to domesticate the wild Plums and produce them on a commercial basis in orchards by grafting them on to Myrobalan Plums and Peach roots.

CANNED FRUITS EXPORTS.

The exports of canned fruits to various destinations for the current season, January 1 to June 30, 1940, are announced by the Australian Canned Fruits Board. The figures represent cases of 2 doz. 30 oz. tins (or equivalent), a total to date of 847,629 cases.

Country.	Apricots.	Peaches.	Pears.	Fruit-salad.	Pine-apples.	Total.
U.K.	95,691	280,717	349,109	200	34,500	760,217
N.Z.	3,160	5,893	322	—	53	9,428
Canada ..	6,012	29,032	3,742	1,304	12,748	52,838
East	5,976	7,994	7,863	1,623	20	23,476
Misc.	256	675	620	56	63	1,670
Total	111,095	324,311	361,656	3,183	47,384	847,629

Phone: Epping 96. After hours: Epping 58.

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CATALOGUE FREE on Application.

A MOTTO FOR THE TIMES...

STICK TO THE RIGHT METHODS; USE THE BEST IMPLEMENTS

The SUNMASSEY

ORCHARD CULTIVATOR

stands alone for killing weeds and preserving moisture

Spring or rigid tynes. With pole, neckyoke and 2-horse swings or with forecarriage.
Strong "C" type springs enable very heavy pressure to be placed on the two floats. Both sections are raised and lowered by the one lever. When equipped with rigid tynes and 1¼ in. reversible points, it is an excellent lucerne renovator.

7-tyne cultivates 3 feet 4 ins.
9-tyne cultivates 4 feet 4 ins.
11-tyne cultivates 5 feet 4 ins.
13-tyne cultivates 6 feet 4 ins.

MASSEY HARRIS No. 44 PLOUGH

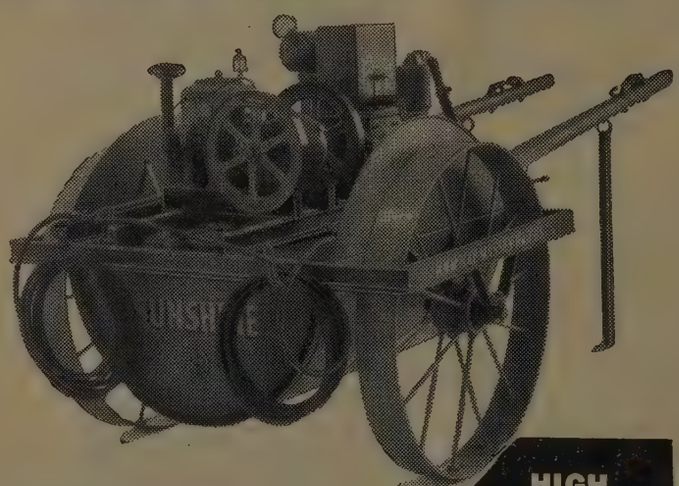
An excellent one-horse orchard or general purpose plough. High beam of bobbin section steel, giving clearance at throat of 20 in. Is fitted with shifting handles and wide-range bridle which permits ploughing close up to vines or trees. Mouldboard 22 inches long. Cuts furrows 7 to 11 inches wide and to 8 inches deep.

SUNVINE Mouldboard Plough

A special plough for vineyards; will plough right up to posts and vines. Adjustable, spring-mounted fender rod prevents contact of share with vine stem or tree trunk. Handles are adjustable for height.
Available also with long handles and extended bridle for orchard work. Cuts furrow 10 ins. wide and to 5 ins. deep. Overall length, 6 ft. 9 in.

For Better Spraying, choose a...

SUNSHINE OUTFIT..



The Sunshine Two-wheel Power Spraying Outfit provides the greatest possible help in combating orchard and vineyard diseases and parasites.

Will serve 4 nozzles or 2 guns simultaneously.

Delivers 4 gallons per minute at 350 lbs. pressure with engine running at 600 r.p.m. Increased delivery obtainable by raising engine speed.

Pressure readily adjustable.

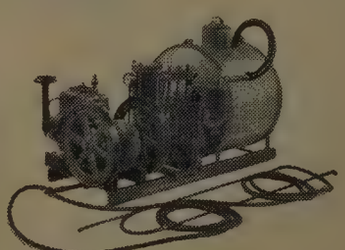
It is economical to buy and to run, easy to operate, light in draught and absolutely dependable for long trouble-free service.

The engine (Sundial 2 h.p.) can be removed quickly to drive other machinery, and just as easily replaced in its correct adjustment to the spray pump.

HIGH PRESSURE

GENEROUS CAPACITY

LOWEST RUNNING COST



The Sunshine Spraying Outfit for use on truck, dray or lorry is equally outstanding in its field.

Delivers 4 gallons per minute at the full rated pressure of 250 lbs.

Ideal for Vineyard Spraying

Free Leaflets and Catalogues give full details. Ask your local agent, or write direct.

H. V. McKAY MASSEY HARRIS PTY LTD.
(Incorporated in Victoria)

Sunshine Harvester Works, Sunshine. Also at Melbourne, Sydney, Adelaide, Perth. Queensland: H. V. McKay Massey Harris (Qld.) Pty. Ltd., South Brisbane.

Fertilising Deciduous Fruits

Recent American Experiments

THE continuous cropping of fruit trees makes heavy demands on the plant food reserves in the soil and in a recent issue of "Better Fruit," the official publication of the Washington State Apple Commission, some interesting figures are given which show the amounts of nitrogen, phosphoric acid and potash removed per acre by good yielding crops of Apples, Peaches and Grapes. The figures are as follows:—Apples yielding 400 bushels per acre remove 25 lbs. nitrogen, 10 lbs. phosphoric acid and 25 lbs. of potash, Peaches yielding 500 bushels per acre remove 85 lbs. of nitrogen, 25 lbs. of phosphoric acid, and 100 lbs. of potash, while Grapes yielding 4 tons per acre remove 25 lbs. of nitrogen, 10 lbs. of phosphoric acid, and 35 lbs. of potash.

To the practical fruitgrower these figures may not mean very much, but when translated into the amounts of artificial fertilisers necessary to supply these quantities of plant food materials their full significance will be realised quite readily.

In order to supply the nitrogen, phosphoric acid and potash taken up by the 400 bushel Apple crop about 156 lbs. of natural nitrate, 45 lbs. of superphosphate and 50 lbs. of sulphate of potash would be required. The 500 bushel Peach crop would require about 530 lbs. of natural nitrate, 114 lbs. of superphosphate, and 200 lbs. of sulphate of potash, and for the production of the 4 ton Grape crop 156 lbs. of natural nitrate, 45 lbs. of superphosphate and 70 lbs. of sulphate of potash would be required.

Correct methods of cultivation and the growth and subsequent ploughing under of green manure crops are invaluable aids in maintaining and promoting soil fertility, but it is obvious that these practices must be combined with the judicious and liberal use of artificial fertilisers if the best results are to be obtained.

Nitrogen Essential for Best Results.

Extensive fertiliser experiments carried out on deciduous fruit trees in California (Cal. Agr. Expt. Stat. Bull. 610, 1937) have clearly demonstrated the value of nitrogenous fertilisers for Peaches, Pears, Apricots and Almonds. In the case of Peaches the experiments were conducted for a period of five years and each plot consisted of nine trees. Triplicate plots of all treatments were maintained throughout the experiment. Over the whole period the trees receiving nitrogen averaged about 50 lbs. of fruit per tree more than the untreated trees. This represented an increased yield of about 20 per cent. and amounted to an increase of about 2 tons of fruit per acre. For the first two years of the experiment nitrate of soda was used as the source of nitrogen in all the treated plots, and was applied at the rate of 3 lbs. per tree.

During the first year the trees receiving 3 lbs. of nitrate of soda gave an average yield of 301 lbs. of Peaches per tree as compared with an average yield of only 256 lbs. of fruit on the unfertilised check trees. In the second year the trees receiving nitrate of soda had an average yield of 230 lbs. of fruit while the yield of the untreated trees was 177 lbs.

In the experiments with Pears, counts were made to determine the percentage of fruit that set, and in every year that records were taken the trees that received nitrogen showed a greater percentage of fruit setting than did the untreated control trees. Moreover, the trees that received nitrogen gave a 26.2 per cent. increase in yield.

In the case of Almonds it was found that not only did the nitrogen markedly increase the yield but it also improved the quality of the nuts. The unfertilised plots yielded over 700 lbs. of hulled nuts per acre and the plots receiving nitrogen yielded over 1,600 lbs., or more than double that of the unfertilised plots.

All fruit trees require an abundance of readily available nitrogen in the early Spring period in order to stimulate growth, promote blossoming and ensure the maximum setting of fruit. The Californian experiments have clearly shown that the use of nitrogenous fertilisers greatly increases the yield of various fruits, and during the early Spring period Australian orchardists also will find that a quick acting source of nitrogen like nitrate of soda is an invaluable aid in the profitable production of their crops.

CANNED FRUITS CONTRACT.

750,000 Cases Sold.

The Minister of Commerce announced at Canberra on July 24 that the sale of 750,000 cases of Australian canned fruits to Great Britain had been effected, representing an amount approximating £700,000. This represented consignments already received in Britain, shipments afloat, and a small balance still to be shipped.

Payment will be made up to 90 per cent. of value upon arrival and the balance after clearance.

A cut lemon may be kept fresh for a long time by laying it on a piece of waxed paper, with the cut side downwards, and folding the paper over it in such a way as to exclude the air.

THE CITRUS INDUSTRY

ELECTRICITY INCREASES PRODUCTION.

Also Prevents Frost Damage.

Experiences of U.S.A. Lemon Grower.

Electricity is being used as an aid to plant growth in various ways in this country and elsewhere. A recent report from Los Angeles, Cal., states a grower of **citrus fruits, by use of infra-red ray lamps, is able to stimulate the growth and cropping of his trees and also protect them from frost damage.** The usual method of frost protection is smudge pots, but in this case the grower can lie in bed with the knowledge that a thermostat will start the lamps when the temperature drops to 38 deg. or lower.

It seems, states an American exchange, that this grower accidentally discovered a partly burned out spot light on a motor car, thrown from the road on to a petrol station thermometer some distance away, caused the mercury to rise perceptibly, despite window glass in front of it.

Having some knowledge of electricity, the grower installed some infra-red ray lamps over his trees and is satisfied after one year that they help, because his **Lemon trees have made more growth than normal.**

Under the influence of the lamps, the trees grow all Winter and bear a fresh crop of blooms every six weeks so that he can pick fruits every 30 days, only 1 per cent. reaching the tree ripe stage. Ordinarily as high as 40 per cent. of the Lemon crop may become too ripe to ship because the set is not sufficiently scattered.

The cost of running the lamps over the 100-odd acres of orchard is said to be only 12c. (6d.) per hour per acre, against $1 (4/2) or so for oil smudge pots. It seems that the darker the foliage of the trees, the more heat they can absorb, consequently the trees are well nourished to induce healthy leaf growth.

ONE MILLION DOLLARS FOR ADVERTISING.

Sunkists Ambitious Programme.

Creating a record even for this well-known Exchange, the California Fruitgrowers Exchange voted one million dollars for advertising Valencia Oranges this year. Newspaper, radio and poster advertisements appeared in all U.S.A. States and Canada and a levy of 7 cents per case was made to meet the increased cost. 76 experienced salesmen were appointed to supplement the advertising campaign by concentrating on sales promotion amongst retailers.

INCREASED LEMON PRODUCTION.

Meeting Decreased Imports.

The production of more Lemons for the supply of essential oils in Australia was urged recently by Dr. A. E. V. Richardson. Up to date the greater part of such oils used in Australia is obtained from Italy, where the process is carried out by hand squeezing and the trade has been handed down from generation to generation and is of great antiquity. It has been stated that hand squeezing was necessary to recover the delicate nature of the oils from the peel, but a process had now been evolved whereby mechanical extraction gave results equal to those resulting from the laborious hand process.

Australia imported £44,000 worth of Lemon oils from Italy per annum and the importation of citrus acids is valued at £23,000 a year and it could readily be understood what all this means to Australia.

MORE ORANGE SALES.

Retailers' Reports.

How does American experience compare with Australian? may be asked after reading a report by Dr. Rasmussen, of the Cornell University. His officers approached 4,000 food stores about the relative sales of five of the largest selling varieties of fresh fruit. Independent grocers stated that they sold 100 Oranges to 65 Apples, 37 Bananas, 47 Grapefruit, and 18 Pears.

Chain grocery stores' report was 100, 26, 23, 41 and 16 respectively. Fruit and vegetable stores 100, 85, 32, 48 and 26. Fruit carts 100, 240, 14, 42 and 68, and delicatessen stores 100, 49, 51, 52 and 12 respectively.

The variation cannot be laid to seasonal influences, to appetite appeal or food value, he adds. Probably the greatest influence can be laid to more advertising of Oranges, and taken altogether, the cost is comparatively small.

HEALTH FROM CITRUS JUICES.

Doctors Order Citrus.

DIETETIC RESEARCH is effecting greater popularity for fruit juices and the medical profession is placing importance upon fruit juices for the prevention and cure of certain diseases. Even so, much further research is needed. During the Great War soldiers who were given ample citrus juices when convalescing in the south of France made quicker recoveries than those not receiving the juices. Surgical operations are quoted to heal cleaner and more quickly when patients are given citrus juice before the operation. Vitamin C, contained in citrus juice, assists wound healing.

The Director of Nutritional Research for the California Fruit Growers' Exchange says that tubercular patients require more Vitamin C than healthy persons, and that the absolute minimum required is 30 milligrams per day, but 100 m.g. is not too much, representing the juice of eight Oranges or Lemons.

CITRUS PULP FOR CATTLE.

Economical and Palatable.

Still another by-product of citrus fruit is being exploited in Florida, U.S.A. Already six large plants are producing dried citrus pulp for cattle feed. It is claimed to be better for dairy cows than is dried beet, until now imported from Poland and Japan, and is 20 per cent. cheaper for dairy farmers whilst using up surplus fruit that was formerly wasted. It is said that the use of citrus pulp does not affect either the taste or color of the milk.

Briefly, the process is to use the peel after the juice has been extracted for canning. It is then cut up and the remaining water is pressed out. The cut peel is then steam dried and molasses or lime (or both) are added in the required quantities, and the dry pulp is bagged ready for sale and use.

ORGANISATION, STANDARDISATION AND ADVERTISING.

Success of "Sunkist" Organisation in California.

The following is an extract from a report by California Fruit Growers Exchange ("Sunkist") :—

"Primarily, the function of our advertising is to increase the consumption of citrus fruits. To do this it is necessary to have a brand around which we can build our advertising arguments. This brand is the consumer's protection. It is his guarantee as to the quality of the fruit. In other words, we want him to feel that all he needs to know about an Orange or Lemon is that it is 'Sunkist.' We must make the consumer realise that the name 'Sunkist' on an Orange or Lemon means just what the sterling mark means on silver.

"Our advertising will create in the minds of the consumers a public consciousness of the food value of Oranges and Lemons. This can only be done by maintaining the highest possible standard of quality, for unless an article has quality it cannot be successfully advertised.

"The permanent prosperity of the citrus industry depends on getting a sufficient number of people to use the Oranges and Lemons. And this can most thoroughly and economically be accomplished by giving the public reasons why they should use them and suggesting to them various uses for which they can be served.

"Advertising is not a mysterious thing. It is simply telling people the truth about the thing we have to sell and telling them through those channels in which they have confidence and to which they are accustomed to look for information and guidance."

"Waiter, there is a brass chain in my soup."

"Well, sir, you could not expect a gold chain in a half-crown lunch."

"HILLMAN" ORCHARD STRIP PLOW

Double Furrow

A sturdy, strong plow equipped with reversible discs to enable the operator to plow up to, or away from the trees. Operated by a single lever and with nothing to catch branches of trees. To facilitate the movement of the plow around the orchard the discs are movable and lift clear of the ground.

The steering arms are drop forged from the best mild steel and the main wheels are equipped with ball bearings.

Two medium horses can work this machine all day without tiring. A machine may be obtained for a trial at any time.

Further particulars apply . . .

HILLMAN & KEOGH

Implement Manufacturers

Shipley Street, Box Hill, Melbourne, E.11

• THE MARKET GROWER •

CABBAGE VARIETIES.

Suitable Seasons.

Many disappointments have been experienced through growing certain varieties at the wrong time of the year. Mr. J. Douglass, Agricultural Adviser, gives the following information in the "N.S.W. Agricultural Gazette" regarding seasons and varieties.

Early Jersey Wakefield is the earliest commercial variety in that State. Can be harvested two months after transplanting. Has a small, long, pointed heart of high quality. Plant closely together. Responds to forced feeding.

Copenhagen Market matures at 2½ months after transplanting. Small, hard heart. Hardy even in poor clay soil.

Enkhuizen Glory: A popular variety, early maturing, round head. Responds to good soil and heavy feeding. Solid head. Will stand well after maturity. Scanty outer leaves.

Early Forcing Globe: One of earliest maturing in State. Round, compact, solid head. Soft texture so a poor carrier.

Drumhead: Reliable cropper in all districts. Large, solid heart. Excellent carrier. Best for Autumn and Winter crop.

Succession: The largest variety in N.S.W. Varies in length of maturity. Responds to good soil condition and is payable in most districts.

Burrawong derives its name from that district. Several types varying from early pointed type to later solid head type. Very dependable cropper under forced conditions.

Savoy Cabbage: Green in color with wrinkled leaves. High quality when grown in cold districts.

Red Cabbage: Mainly used for pickling and so popular with foreigners for salads. Cooks well.

POTATO SHORTAGE.

It is anticipated that Victoria's potato crop will be well down this year. With an average of 125,241 tons over the past five years and 81,415 tons last year, it now seems that the crop for 1940 will only reach the vicinity of 65,000 tons.

Under these circumstances, the Conference of Potato Growers held last month recommended that growers in the early districts plant a larger area than usual in order to relieve the threatened shortage.

N.S.W. VEGETABLE GROWERS HELP.

Ambulance Promised.

Vegetable growers in the Guyra district, N.S.W., have pledged themselves to raise a fund of £500 to buy an ambulance for the Red Cross. Seventy bags of vegetables were recently donated and auctioned in Sydney for £89/4/6, the market value would have been £35. Further shipments donated will be auctioned. It is reported that a produce merchant paid £2/2/- for two bags of potatoes and gave them back to be resold. The idea caught on and they were sold and returned for resale nine times before delivery was finally taken.

So both wholesalers and producers are competing in the war effort as an addition to their usual business.

BRUSSEL'S SPROUTS.

Rich in Flavor.

Of all the Brassica family, Brussels Sprouts are the most difficult to grow, but are also the richest in flavor. Other varieties of the Brassica include Kole, Cabbage, Cauliflower, Broccoli, and Kohl Rabi. Plants are now available at seed stores. The Sprouts like stiff loamy soils that have been thoroughly dug and well manured.

When planting seedlings about 6 in. high, they should be placed about 24 to 30 in. apart, and the same distance between rows. They mature at about 12 to 15 weeks after transplanting. As they will carry the attached Sprouts for a considerable time they provide a regular supply if planted out a few at a time. They require only an occasional watering, and may be stimulated by sulphate of ammonia, or nitrate of soda when nearing maturity.

"Then she isn't one of the sympathetic sort?" said Smith.

"Sympathetic!" snapped Brown. "Why, it's my opinion that woman wasn't born — she was quarried!"

"Plane" Brand Dusts

"Beauty" (Knapsack) Dusters
"Superior" (Rotary) Dusters
ARE MANUFACTURED BY
N. N. McLEAN Pty. Ltd.
395 Queen Street
MELBOURNE

Cables—Monro, London. Codes—A.B.C. 5th Edition and Bentley's

GEO. MONRO Ltd.

The Most Important Fruit-Distributing Organisation in the World.

COVENT GARDEN MARKET, LONDON, and SMITHFIELD MARKET, MANCHESTER

Other Branches: **BIRMINGHAM, GLASGOW, WORTHING, SPALDING and HULL**

Sales on Commission, by Private Treaty only.

Over sixty years' of Fruit Distribution.

We do not purchase.

Our Sale Rooms are the largest and most up-to-date in England; consignments are therefore displayed to the best advantage, consequently, our returns are the best.

We have specialised in the Sale of Australian Apples and Pears by expert salesmen for many years past, and we have the largest and best customers in Great Britain amongst our clients.

Bigger and better business is our objective.

We make advances to cover cost of freight, etc.

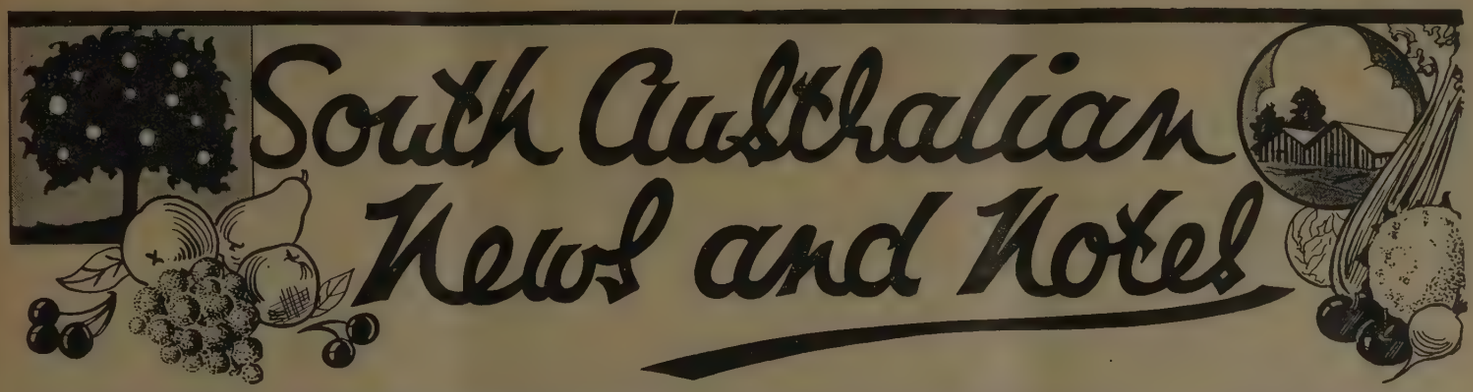
(Established 1862)

DIRECTORS:

Major Edwin G. Monro, O.B.E. (Chairman), Geo. Monro, C.B.E., Bert J. Monro, Captain J. Stuart Monro, Alex. J. Monro, and C. Cole.

Chief Agent in Aust.—**Major H. Dakin, V.D., Goldsbrough House, Macquarie Place, Sydney, N.S.W.**

Victorian Representative . . . . . Esmond Russell Pty. Ltd., 395 Collins St., Melbourne.
Southern Tasmanian Representative W. H. Ikin & Son, Dunn Street, Hobart.
Northern Tasmanian Representative Bell & Gerrard, No. 200 Cimitiere St., Launceston.
West Australian Representative . . The Westralian Farmers Ltd., Perth.



INCLUDING OFFICIAL NOTES AND REPORTS FROM THE SOUTH AUSTRALIAN FRUITGROWERS' & MARKET GARDENERS' ASSOCIATION.

S.A. Fruitgrowers' and Market Gardeners' Association Incorp.

Meeting of Executive Committee

THE Executive Committee of the above Association met in the Committee Room, 288a Rundle-street, Adelaide, on July 26, 1940, at 10.30 a.m.

Mr. H. N. Wicks (President) presided over the meeting, which was attended by Messrs. R. Hunter, G. H. Schultz, F. Hughes, L. J. Wicks, J. Turner, C. J. Pitt, H. B. Robson, A. O. Petersen, O. Essalbach, J. B. Randell, N. T. Hobbs, M. J. Vickers, W. H. Ind, R. A. Cramond, and L. B. Pfeiffer.

An apology was received from Mr. C. Ridley.

Notices and Minutes of Meetings: Discussion arose on whether the decision at the June meeting to discontinue sending copies of minutes, together with notice of Executive meetings was advisable. The Chairman stated that the decision was made with the object of economising wherever possible, and also to conserve paper supplies. As the "Fruit World" (available to every member) contained all the necessary information, it was not considered necessary to duplicate the matter.

Mr. G. H. Schultz moved "That the decision of the June meeting to discontinue sending minutes to Executive members be further confirmed." Seconded Mr. L. J. Wicks. Carried.

Branding of Cases: The Chief Horticulturist (Mr. A. G. Strickland) was present, and in reply to a question stated that the Regulations required growers when marketing citrus in an open case to legibly mark the case according to its grade, i.e., Special, Standard, or Plain. He advised growers to secure a "Standard" stencil to mark their cases, as this would be the grade mainly marketed.

Fruit in Cold Storage: Mr. Strickland also stated that at June 30 approximately 100,000 cases of Apples were held in cool store in South Australia.

Department of Information: The Secretary reported that he had attended the last meeting of S.A. Producers' Group of Department of Information, when Dr. Phipps, of Waite Institute, delivered a lecture on the growing of Flax. A meeting of all South Australian Groups would be held on Monday, July 29, when Sir Keith Murdoch would deliver an address.

Sectional and Branch Reports.

Fruitgrowers' Society Ltd.: The Chairman of the Committee of Management (Mr. W. J. Bishop) reported that the Society had just completed a most satisfactory year's operations. Concern, however, was being felt at the definite shortage prevailing in bone manure.

Marion Branch: The Secretary, in apologising for the absence of the Branch Delegates (Messrs. H. W. Parsons and N. Edwards) reported that the Branch was holding its annual meeting on Wednesday, August 7. The Annual Tour of Inspection of Almond Blossom by interstate visitors was set down as August 5. The show of blossom over the next two weeks was recommended to any members of the Association.

Mr. A. Esselbach (Citrus) and Mr. N. Hobbs (Celery) reported on the activities of their respective Sections.

Apple and Pear Section: Mr. M. J. Vickers stated that little could be divulged of the Conference in Canberra held July 1 until after the Federal Cabinet had considered the recommendations made by the Conference. He also stated that the S.A. Apple and Pear Acquisition Committee were forwarding Apples for exhibition at the Brisbane Royal Show. The Apples originally intended for exhibition at the Adelaide Show are being used for the Brisbane display.

Onkaparinga Potato Branch: The Chairman of the Branch (Mr. L. B. Pfeiffer) reported that the Branch was making good progress, and a general meeting would be held at Woodside late in July when Mr. A. G. Strickland would be invited to attend.

Annual Meeting and Conference: Mr. A. O. Petersen moved: "That the annual meeting of the Association be held at 11 a.m. on Friday, 27th September followed by the Conference at 2 p.m. but the usual practice of holding a Conference Dinner be discontinued this year, but members be asked to donate the usual cost of dinner tickets for the purpose of purchasing War Saving Certificates." Seconded Mr. F. Hughes. Carried.

Annual Meeting: Mr. W. J. Bishop moved "That the Premier (Hon. T. Playford) be invited to open the annual meeting." Seconded Mr. O. Esselbach. Carried.

Conference: Mr. M. J. Vickers moved: "That the Minister of Agriculture (Hon. A. P. Blesing) be invited to open the Conference." Seconded Mr. C. Pitt. Carried.

Conference Speaker: Mr. W. J. Bishop moved "That the Chief Horticulturist (Mr. A. G. Strickland) be invited to address the Conference on his trip to England." Seconded Mr. H. O. Petersen. Carried.

Agenda for Conference: Mr. G. H. Schultz moved "That a sub-committee be appointed to arrange agenda for Conference." Seconded Mr. J. B. Randell. Carried.

Resolved sub-committee consist of President, Vice-President, and Mr. W. J. Bishop.

AUGUST EXECUTIVE COMMITTEE MEETING.

The Executive Committee of S.A. Fruitgrowers' and Market Gardeners' Association Incorp. will meet in the Board Room, 288a Rundle-street, Adelaide, on Friday, August 30, 1940, at 10.30 a.m.

Business.

Confirmation of Minutes.
Correspondence.
Sectional and Branch Reports.
Report on Conference Arrangements.
Financial Report.
General Business.
Attendance of all members is requested.

H. N. WICKS
(President)
A. STUART
(Secretary)

NOMINATIONS FOR VACANCIES ON EXECUTIVE COMMITTEE OF S.A. FRUITGROWERS' AND MARKET GARDENERS' ASSOCIATION INCORP.

Members of the Association are hereby notified that nominations for President, Vice-President and 10 members of the Committee must be lodged with the Secretary on or before August 31, 1940.

The retiring members are as follows:—

President: Mr. H. N. Wicks.
Vice-President: Mr. C. J. Pitt.
Immediate Past President: Mr. W. J. Bishop.
Committee: Messrs. L. J. Wicks, N. T. Hobbs, H. B. Robson, J. B. Randell, A. O. Petersen, R. A. Cramond, C. W. Giles, J. Turner, R. Hunter, and Hon. T. Playford.

The retiring members are all eligible for re-election. Nomination forms can be obtained at the Association offices, 288a Rundle-street, Adelaide.

"HARVEY"
PLOWS & PARTS
Distributors:
Silbert, Sharp & Bishop Ltd.
RUNDLE STREET EAST,
Telephone ADELAIDE C 5754

INSURANCE
.. The ..
F. & M.G. Society Ltd.
Recommend that Growers avail themselves of Insurance benefits with
GENERAL
ACCIDENT FIRE AND LIFE ASSURANCE CORPORATION LTD.
Assets Exceed . . . £19,000,000
Claims Paid 85,000,000
Definitely Concessions offered to Shareholders.
A. STUART, Secretary.
F. & M.G. Society Ltd

BETTA PACK FRUIT STORAGE CO. PTY. LTD.,
436 Queen St., Melbourne.
The most modern cool storage in Victoria. Right opposite Victoria Fruit Market.
Fruit Ripened, Colored, Packed and Stored. Gluts Avoided.
Fruitgrowers call or write.
Telephone F 3093.

G.V.B.
& GANE
Milking Machines
Distributors:
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RUNDLE STREET EAST,
Telephone ADELAIDE C 5754

PATRIOTIC GESTURE BY TOMATO GROWERS.

Ambulance for War Purposes to be Provided.

A general meeting of growers of the Tomato Section of the S.A. Fruitgrowers' and Market Gardeners' Association Incorp. held on July 4 last was unanimous in its desire to afford some practical assistance in Australia's war effort.

The meeting unanimously decided to levy the export of its members during 1940 season to provide the necessary funds for the purchase of an ambulance for presentation to the Military Authorities.

It is anticipated that the presentation will be made by the end of the year, but in the event of the war being concluded by that time the money so raised will be presented to the Adelaide Children's Hospital.

NEW POTATO BRANCH.

The desire of Potato growers to become better organised led to the formation of a Branch of the S.A. Fruitgrowers' and Market Gardeners' Association Incorp. at Woodside.

Following three well-attended meetings of growers held at Woodside at which Executive officers of the Association stressed the need for organisation and co-operative effort, the new Branch came into being, and assumed the name of the Onkaparinga Potato Branch.

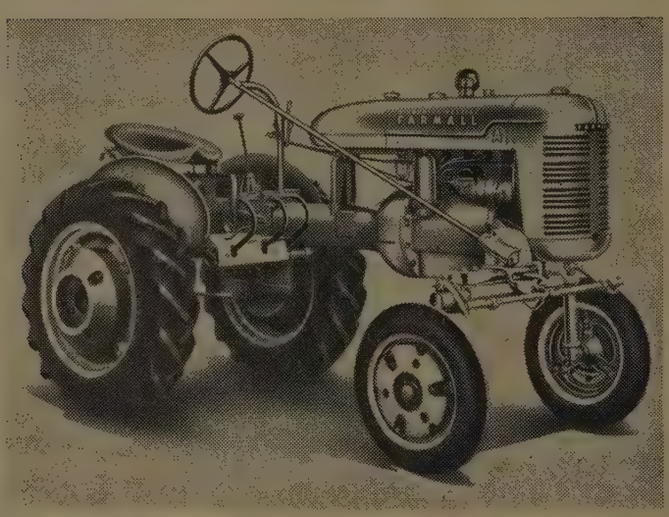
A local Committee was formed led by Messrs. L. B. Pfeiffer (President), B. Schapel (Secretary), and is rapidly increasing the membership of the Branch.

Schemes for the betterment of the Potato industry are being formulated by the Committee, one of which is a scheme for the Certification of Seed.

The first annual meeting of the Branch will be held at Woodside late in August, when the Committee will submit the results of its activities to growers.

The Chief Horticulturist (Mr. A. G. Strickland) will be invited to attend the meeting, and the attendance of all members and interested growers is especially requested.

CLEAR VIEW AHEAD



FARMALL-A *with Clear-Vision*

● *"Clear Vision" ends body twisting and neck craning.* With Farmall-A you sit on a comfortable sponge-rubber seat, right over your work! Nothing blocks a clear view ahead.

Farmall-A is a genuine Farmall. Its smooth, economical 4-cylinder engine has replaceable cylinders. A 4-speed transmission with 10-mile road speed assures flexible operation.

Whether it replaces the last team on the large farm or does all the work on the small farm, the snappy new rubber-tyred Farmall-A, at its low Farmall price, is great tractor value.

Ask us about Farmall-A and its full line of direct-connected machines, or call and have a talk with the local agent.

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(Incorporated in Victoria)
171-205 CITY ROAD, SOUTH MELBOURNE, S.C.4
ROBT. NETTLEFOLD PTY. LTD., HOBART, Agents for Tasmania 3719

McCORMICK-DEERING
FARMALL A
THE NEW TRACTOR WITH "CLEAR-VISION"

Cheer Up Society

Appeal to Fruitgrowers' and Market Gardeners' for Assistance with Fruit and Vegetables.

The Cheer Up Society is doing a very commendable, charitable work in supplying the needs of our soldiers when on leave.

This work of necessity requires considerable assistance from the general public owing to the tremendous call on the Society which is purely a voluntary organisation.

The meat and other industries are assisting the Society, and an appeal has been made to the S.A. Fruitgrowers' and Market Gardeners' Association for assistance in supplying fruit and vegetables.

Will any grower able to assist regularly in this way contact the Secretary of the Association so that a depot can be formed in the markets where supplies can be left. Potatoes are a line which would be gratefully received by the Society.

The South Australian Fruit Marketing Association, Inc.

Meeting of Executive Committee.

MINUTES of monthly meeting of members held at Adelaide on July 26, 1940, at 2.45 p.m.

Present: Messrs. F. B. James, H. N. Wicks, A. G. Strickland, M. G. Basey, R. Fowler, C. L. Winser, R. G. Hannaford, R. B. Pritchard, A. O. Petersen, R. A. Cramond, G. Quinn, M. J. Vickers, J. B. Randell, W. W. Miller, S. M. James, F. F. Redden, P. R. B. Searcy, L. J. Bishop, R. H. A Lewis, and the Secretary.

The President, Mr. J. B. Randell, occupied the chair.

War Savings Certificates: The Secretary reported that £250 War Saving Certificates had been taken up and deposited for safekeeping at the E.S. & A. Bank.

Minutes: Owing to paper shortage it was resolved: "That the practice of forwarding copies of minutes to members should be discontinued. Copy of the minutes to be sent to the President and the Chairman of the Growers' Sub-Committee only, except in special circumstances."

It was thought that practically all members could get any information required from the report of the meeting published in the "Fruit World."

It was also agreed that after the August meeting notices of future meetings would only be given in the "Fruit World."

Canberra Conference: Delegates reported that no details were available and no report could be made at present.

Growers' Sub-Committee: An interesting talk had been given by Mr. A. G. Strickland, Chief Horticulturist, and would be continued at the August meeting.

It was also suggested that at the annual general meeting of members in November next, arrangements should be made for Mr. Strickland to show films taken during his recent trip abroad.

Canberra Conference, June, 1938: Attention was drawn to the fact that the delegates to the Canberra Conference in June, 1938, had not received their allowance of £1 per day which had been agreed to by the Committee, and it was resolved that this payment should now be made.

Apple and Pear Acquisition Committee: There was a brief discussion in regard to the work of the Apple and Pear Acquisition Committee and attention was drawn to certain anomalies, and Mr. P. R. B. Searcy replied to some of the criticisms, pointing out the difficulties that had been experienced.

On the motion of Mr. Basey, seconded by Mr. Redden, it was resolved:—"That the Chairman of the State Apple and Pear Acquisition Committee be asked to make a statement in the Press setting out the present position and pointing out the cause of the delay in making the second payment and dealing with such matters as would be of interest to the growers and assist them in connection with carrying out the requirements of the Committee."

Growers' Sub-Committee Meeting

MINUTES of monthly meeting of members held at Adelaide on July 26, 1940, at 1.45 p.m.

Present: Messrs. F. B. James, H. N. Wicks, A. G. Strickland, M. G. Basey, R. Fowler, C. L. Winser, R. G. Hannaford, R. B. Pritchard, A. O. Petersen, R. A. Cramond, G. Quinn, M. J. Vickers, J. B. Randell, W. W. Miller, S. M. James, F. F. Redden, and the Secretary.

Mr. M. G. Basey occupied the chair.

In reply to a query at the previous month's meeting, Mr. A. G. Strickland supplied information in regard to an effective method for destroying crickets in lawns.

Monthly Talk.

Mr. A. G. Strickland, Chief Horticulturist, addressed the meeting on his trip abroad last year. He dealt with the fruit importations to the United Kingdom and gave figures in

THE SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION INC.

The August meetings of the Association will be held at the Secretary's office, 83/4 Brookman Buildings, Grenfell-street, Adelaide, on Friday, August 30, 1940.

Growers' Sub-Committee commencing at 1.45 p.m. Speaker, Mr. A. G. Strickland, Chief Horticulturist. Executive Committee commencing at 2.45 p.m.

E. WHITFIELD MILLS,
Secretary.

regard to the total quantity of fruit imported into the United Kingdom and the proportions supplied by different countries.

Fruit supplied by United States, Canada and Argentine was superior to the Australian fruit, and although the best fruit supplied by Australia was satisfactory, undoubtedly the worst fruit from Australia was very detrimental to the industry.

Interesting information was given in regard to the packing and grading of fruit and the chief faults of the Australian packs were due to slackness and bruising. He took the opportunity of testing the weights of certain cases of fruit which had been marked before he left Australia, and it was found there was practically no loss of weight. It was of the utmost importance that Australia should aim to improve the pack and make it equal to that of her chief competitors. He considered that generally speaking corrugated cardboard was not the best packing material to use, and various types of stiff paper were proving effective and resulted in the cases looking more attractive.

No definite solution had been obtained on the question of "counts" or "sizes." Opinions in the United Kingdom differed considerably on this point.

It was essential that more attention should be given to labelling, in many instances this work had been carelessly done and cases arrived with the labels in very bad condition.

In regard to condition of fruit, breakdown in some cases could be definitely traced to light crop trees, while over-maturity was due in some cases to the length of the voyage, but in others to the fruit being held too long between picking and forwarding, causing a loss of potential storage life.

The handling of the fruit on the docks in the United Kingdom was very unsatisfactory, cases being thrown about, carelessly stacked in all sorts of ways, and walked over with complete indifference.

He had visited many Research Stations abroad. At East Malling, in Kent, outstanding work was being done on many problems, the work on stocks being one of the main features.

At Long Ashton they were working chiefly on fruit juices and cider. It was interesting here to see the extreme effects of potash deficiency.

Experiments were being conducted in connection with the gas storage and it was possible that this would prove very useful for Williams Pears.

In Germany, near Dresden, there were a number of testing stations for varieties of trees, crops, etc., and interesting work was being done.

A matter of particular interest was the Viticulture Protection Service; under this service part-time vineyard guardians collected information and supplied to the Government Bureaux. He thought the adoption of this service would be an advantage to Australia, but not run on totalitarian lines.

In the United States sprays were being used to stimulate the roots of cuttings, and it was also found that sprays could be used which would increase the time the fruit would remain on the tree, and check excessive falling of the fruit.

As time did not permit of any discussion, Mr. Strickland kindly consented to continue his remarks at the August meeting.

The Chairman expressed the thanks of the members to Mr. Strickland for giving this address, and a hearty vote of thanks was passed.

AUSTRALIAN-GROWN GINGER.

Decreased shipping owing to the European and Japanese wars is causing Australia to attempt to supply many lines that were previously imported. Ginger is one, and a new organisation known as the North Coast Ginger Growers' Co-op. Society Ltd. has been formed to produce and market ginger. A Sydney firm has contracted to pay 4d. per lb. for this product and planting is being arranged at Wardell, N.S.W. Ten acres will be cultivated as an experiment.

FERTILISING CITRUS TREES

Tests with Washington Navel Oranges

Reduced Yields from an Inadequate Supply of Nitrogen

During 1934 a start was made on the task of finding the best manurial treatment for Washington Navel Oranges growing on the Murray River sands of Mildura. So slowly are the fruiting habits of orchard trees affected by manuring that it is only now that the first results can be set out confidently.

In the following article by Mr. J. L. Provan, B.Agri.Sc., Senior Horticultural Instructor, and C. E. Cole, B.Agr.Sc., Horticultural Research Officer, which appeared in a recent edition of the Victorian "Journal of Agriculture," it is emphasised that this slowness of response is a feature of all such trials. It should be taken as a warning by those growers who, because they do not obtain an immediate response from a single application of fertiliser, reject it as useless. The effects of manures can only be judged over long years by careful observation and accurate recording.

This particular experiment was established on the grove of Captain D. B. Halhed at Merbein, where a block of 22-year-old Navels on Citronelle (Rough Lemon) rootstock, ranging from perfect trees to trees slightly affected by salt, was made available. These trees are planted 24 feet apart or approximately 77 per acre. As a beginning, the health and yield of each tree in the block was recorded, and entered on a plan. On this plan 25 plots, each of five trees, were marked out so as to avoid exceptional trees, and in such a way that each plot was separated from its neighbor by at least one "guard" row. The yield figures obtained at this time, previously to which the block had been manured well and uniformly, served as a measure of the fruiting capacity of each tree, and as a basis on which to estimate the behaviour of the trees under differing treatment.

Soon after the harvest of July, 1935, the first manurial dressings of the experiment were applied. Five treatments were used, namely:—

1.—No fertilisers.
2.—8 lb. sulphate of ammonia per tree (i.e., 5½ cwt. per acre).
3.—8 lb. sulphate of ammonia plus 8 lb. superphosphate per tree.
4.—8 lb. sulphate of ammonia plus 4 lb. sulphate of potash per tree.
5.—8 lb. sulphate of ammonia plus 8 lb. superphosphate plus 4 lb. sulphate of potash per tree.

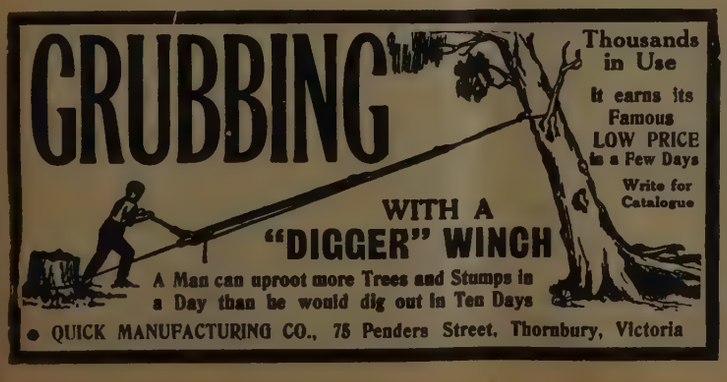
The importance of nitrogen was so well known that it was included in each treatment except the check plots. Each treatment was allotted five plots, and the five treatments were distributed over the 25 plots in such a way that it was possible to distinguish between differences brought about by the treatments and differences due to variations in the soil and in tree health.

Fruit Yields Weighed.

Throughout the experiment, grove practices other than manuring — irrigation, green cropping, pruning, fumigation, and spraying—were maintained uniformly at a high standard. The neglect of any one of these can result in far more drastic reductions in yield and quality than the neglect of manuring.

Each July the various fertiliser treatments were applied, and at each harvest the weight of fruit picked from each plot tree was recorded. The yields in 1936 and 1937 showed no differences due to manurial treatment, although in the latter year the trees in the unmanured plots were obviously less healthy than they had been. Their leaves were becoming smaller and yellow-green, and the amount of dead wood increased in spite of regular pruning.

In 1938 this decline in health was even more marked, and took its toll of the fruit. The first differences in yield due to manurial treatment were obtained. More correctly, the difference was due to lack of manurial treatment, for it was the result of the failing health of the unmanured plots. All the plots receiving nitrogen, in the form of sulphate of ammonia, yielded more fruit than the unmanured plots. The plots receiving potash and/or superphosphate in addition to nitrogen did not yield any significantly greater amount of fruit than the "nitro-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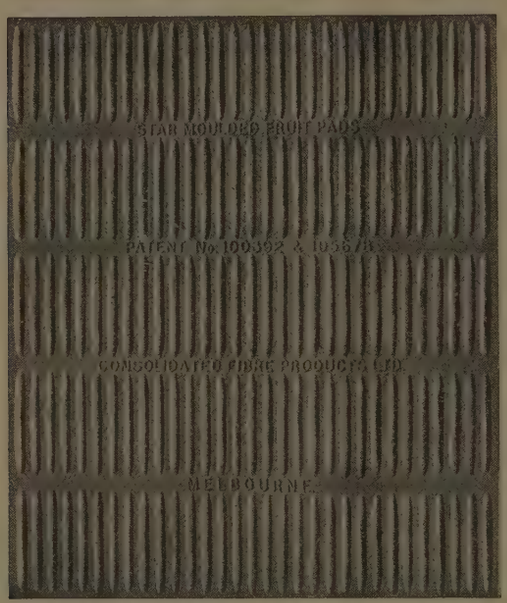

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gen only" plots. The difference was entirely due to nitrogen. The yields for the various treatments in 1938, adjusted according to the yields of the same plots in 1935 before the treatments were applied, are set out below.

Average Yield From 25 Washington Navel Trees at Merbein, 1938.

Manurial Treatment.	Av. yield per tree. lb.
Unmanured	317
8 lb. sulphate of ammonia per tree	441
8 lb. sulphate of ammonia plus 8 lb. superphosphate per tree	432
8 lb. sulphate of ammonia plus 4 lb. sulphate of potash per tree	466
8 lb. sulphate of ammonia plus 8 lb. superphosate plus 8 lb. potash per tree	441

The average yield of all the trees receiving nitrogen was 445 lb., which is 128 lb. higher than that of the unmanured trees. This is equivalent to an increase of 246 bushels per acre for the grove concerned. As this increase was produced at no extra overhead cost, its value on the tree may be regarded as the return from the nitrogen applied. The average value of Washington Navel Oranges on the tree for 1937, 1938, and 1939 was 6/- per bushel. The extra return per acre due to 5½ cwt. of sulphate of ammonia was therefore £73/16/-, which, of course, is more than four times the cost of the fertiliser used during the three years necessary to produce this difference. In addition, the rapid deterioration of the unmanured trees must be taken into account.

Quality of fruit was not forgotten. Samples were taken from each plot in 1938, examined closely for external quality differences, and then submitted to the agricultural research chemist for analysis. The following characters were examined:—Color; rind texture; rind thickness; percentage of juice; percentage of rind; percentage of rag; acidity (acid test); solids-acid ratio; and brix reading (sugars, etc.). The fruit from the various treatments did not differ significantly in any one of these characters. It may be assumed safely that no quality differences had developed during the three years of the trial.

Storage Trial.

A storage trial, too, was carried out with Oranges from the plots. Twenty-two cases from unmanured trees and 72 from trees receiving 8 lb. of sulphate of ammonia were kept for eight weeks in cold storage. At the end of this time wastage was not significantly greater in one lot than in the other, although there was a tendency to greater wastage in the fruit from the unmanured trees.

This, then, was the first stage of the experiment. The conclusions we may draw are:—

(1) That manuring with 8 lb. of sulphate of ammonia per tree is profitable, and does not affect the quality or storage possibilities of the fruit;

(2) That an inadequate supply of nitrogen results in deterioration of citrus trees and reduced yields;

(3) That in three years superphosphate and potash have had no effect on yield or quality. (This soil type usually contains a high percentage of potash (1), but phosphoric acid is generally low. On this property, however, past fertilising practice included heavy applications of superphosphate, and no doubt the residual effect of this fertiliser is still present. In addition, superphosphate at the rate of 2 cwt. per acre has been applied regularly with green manure sowing.)

Question of Profit.

The profitability of nitrogenous manuring for citrus is well recognised, and the experiment provides ample confirmation. It would have been desirable, from some aspects, to carry on the experiment to check up the other conclusions, but the decline in the health of the unmanured trees was so marked that it became necessary to apply nitrogen to them. The experiment has now been altered so that three different dressings of nitrogen—6, 8, and 12 lb. of sulphate of ammonia—are applied within each plot of five trees. The plots continue to receive the same dressings of super-phosphate and potash as they did formerly. So now it is possible to find the most profitable amount of nitrogen to apply, to compare superphosphate and potash, separately or together, with nitrogen only, and to discover how the different rates of nitrogen affect the response to the other two fertilizers.

Each year the yield records are taken, and as often as possible the fruit from each tree will be graded to disclose any effect on size of fruit produced. Samples are taken each year

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Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features with a host of others, was **THE "MONKEY" GRUBBER.**

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Blackwood (S.A.) Experimental Orchard

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THE Blackwood Experimental Orchard, which has been conducted by the Government since 1908 to assist the fruitgrowers of South Australia, has a unique collection of fruit trees. In no other place in the world do climatic conditions allow all kinds of temperate zone fruits to be grown in the one orchard.

It was designed and laid out under the supervision of Mr. George Quinn, for many years Chief Horticultural Adviser to the Department of Agriculture in South Australia.

Some reorganisation is now taking place under the direction of the present supervisor, Mr. A. G. Strickland, preparatory to tackling some present-day problems of the fruit industry.

Experiments with fruit trees at this orchard of 52 acres have been of untold value to South Australian growers, who profit by its system of trial and error, and obtain expert advice on all their problems from the manager, Mr. Rodney Fowler, who was a practical fruitgrower long before he took charge of the orchard.

:: :: ::

Various kinds of fruit stocks, manures, fertilisers and sprays are experimented with.

The trees in many of the State's finest orchards have been grown from buds obtained from the Experimental Orchard. Between 30,000 and 40,000 buds and grafts are supplied to growers every year from standard type trees from which guaranteed stock can be raised.

This is an aspect of the work of the orchard whose importance, Mr. Fowler says, cannot be stressed too much, for it means standardisation, and standardisation is what the fruitgrowing industry wants.

To see over the orchard is to learn a lesson in methodical recording of facts that leaves nothing to chance. Every tree in the orchard is tabulated, its complete history can be looked up in a few seconds.

The trees are set out in blocks, each variety of fruit tree being planted alphabetically. Ask Mr. Fowler to show you any particular tree, and he'll lead you to it without the slightest hesitation. The system of records is like the filing of criminal records at the Detective Office: identify a tree, and you can very quickly learn everything you want to know about its past.

Take a label on a tree, any tree—this one, for instance:—

2366. L. 69. 2.
Apple
Delicious
Nobelius Vic.
/'08

The 2,366 represents the tree number in the numerical record running from 1-4,000. The L is the alphabetical block, 69 the number of the row in the block—the rows are all numbered from east to west. The 2 shows the position of the tree in the row, numbered from north to south. Delicious, of course, is the name of the variety of the Apple, and Nobelius, Victoria, the origin of the tree. The /'08 indicates the year in which it was planted in the Blackwood orchard.

Looking up his records, Mr. Fowler can tell you all about the fruit of this tree—its shape, coloring, skin, flavor, time of ripening, size and length of crop, and produce a nice little pomological description to round off the details.

In this way all the vagaries of fruit crops can be studied, all individual experiences of growers can be checked with the facts that have arisen from the observations at the Experimental Orchard.

The Modern Youth.

Father: "Why, son, don't you want to grow to be a fine industrious citizen like your father?"

Son: "No! I want to work for the government."

FRUIT JUICE OR BEER.

A.I.F. Prefers Former.

An interesting report came from Palestine last month. Sandwiched in between cables reporting heavy fighting in Northern Africa when the temperature hovered around 130 deg. in the shade, was a note that refrigerators had been supplied ot some sections of the A.I.F. in Palestine by the Australian Comforts Fund. A Medical Officer reporting the popularity of this gesture, stated that the most favored drinks were iced tomato juice and Pineapple juice. This recalls that in Iraq (Mesopotamia) during the Great War of 1914-18, lime-juice was an issue and was most necessary in a country where fresh fruit was unobtainable.

SCHOOLBOY HOWLERS.

Envisage signifies being two-faced.

:: :: ::

A minim is a wee fish.

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(Continued from page 22.)

for quality comparisons. It is hoped that within a few years much more information on the manuring of citrus trees will be available. In conclusion, three other citrus trials should be mentioned. The first is at Irymple, where an area of six acres is planted with Washington Navel and Valencia Late Orange trees on the three chief citrus stocks, namely, Citronelle, Sweet Orange, and Sour Orange. When these trees reach full bearing, which will be in two or three years, different manurial treatments will be applied, and, among many other things, the relationship of root-stock and manuring will be studied.

The second trial is located at Long Lake. It is a manurial experiment with Navel Oranges on a soil very different from the Mildura sands. It has been in progress since 1936, but no yield differences have occurred. The third is a smaller trial in the Wangaratta district and has been in progress for two seasons only.

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The Sunshine Massey Harris range of machinery for fruitgrowers is now of greater interest than ever, as several entirely new implements and machines have recently been added to the line.

Among these is a new model of the Sunshine Massey Harris **Orchard Pacemaker Tractor.** This embodies several important new features which give greater efficiency and extra comfort, and is finished in vivid red weather-resistant enamel. It can be equipped with a Tractor Hand Lift and a 12-tyne Cultivating Attachment, or with a 2-gang 10-disc Harrow.

The Orchard Tractor has individual steering brakes, short turning radius, adjustable steering wheel, low-set exhaust and air-cleaner pipes and a low-set streamlined body.

Another new Sunshine Massey Harris Tractor which is attracting great attention is the **"101" Junior.** This is an ultra-modern tractor with self-starter, high compression motor, battery ignition system and "Twin Power," which gives extra power for belt work, extra speed for transport. On rubber tyres, and equipped to operate on kerosene, it delivers 13-19 h.p.; when equipped to use petrol, it gives 16-23 h.p. It is most economical.

The new Sunshine 2-Wheel Spraying Outfit is of particular interest to all fruitgrowers, being a high-efficiency outfit providing high pressure and capacity sufficient for four nozzles or two spray guns combined with economical running. Another spraying outfit is mounted on a steel frame and can be used on a truck or dray.

Amongst the orchard mouldboard ploughs, one is attracted by the popular Massey Harris **National Gang, 2-furrow,** the **Sunbird 2 and 3 furrow,** and the Massey Harris **New Model single-furrow.**

The **Sunmassey Orchard Spring-tyne Cultivator** is also worthy of note. Made in 7, 9, 11 and 13-tyne sizes, this low-wheel cultivator has proved remarkably efficient. It has two highly efficient "C" type pressure springs which are so effective that the points can be made to penetrate hard ground.

Another new Sunshine product, the **Sunreach Disc Cultivator,** has proved of value in cultivating under trees. The widely used **Sunslide Spring-tyne Harrow** is available with disc-control for orchard work.

The above are but a few of the many Sunshine and Massey Harris implements and machines for the fruitgrower. The full range is described in a free, fully-illustrated catalogue, a copy of which will gladly be forwarded on request by H. V. McKay Massey Harris Pty. Ltd., Sunshine Harvester Works, Sunshine, Vic.

VICTORIA.

HARCOURT, 9/7/40. — The fruit crop for the past season was very light, owing principally to seasonal conditions, and the setback the trees had during the preceding two years drought.

At present pruning is in full swing, and judging by the condition of the trees and the amount of fruit blossoms showing, there is every prospect of an abundant crop for the coming season.

Very little rain has fallen this year, but with the reservoirs half full at present, this should provide water for irrigation. Good rains usually fall in the early Spring and these should augment our storages.—Jas. H. Lang.

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Soft Woods in Australia

Lack Now Being Overcome

Future Possibilities.

IT IS DOUBTFUL if Australia will ever be able to produce its full requirements of soft timber. Australia is bountifully supplied with hardwood forests which produce many varieties of timbers that are already well-known and are exported overseas to countries lacking the kind of timbers so plentiful in the Commonwealth.

Nature has been so prodigal in supplying hardwoods that we have become careless in its use and destructive in our indiscriminate wastage of this national asset. Fires have periodically ravaged some of our best timber lands and, to date, very little thought has been given to replacing the loss of millions of acres of timber lands or even conserving what remains of our virgin forests.

But Australia has always lacked and still does lack any great quantity of soft woods, with the result that heavy importations of these timbers from North America and Scandanavian countries have had to supply the requirements of the Commonwealth. It is an economic contradiction that we have had to import overseas soft timbers from which to make cases in which to export many classes of our primary and manufactured products back, in some instances, to the very countries from which such containers originally came.

Lack of Indigenous Soft Timbers.

It has been in only comparatively recent years that the foresight of State Governments and private enterprise has sought to overcome this lack of indigenous soft woods by establishing pine forests in the various States, but until such plantations are large enough and matured enough to attempt to supply local requirements, the necessity to import overseas timbers will remain.

The shortage of shipping facilities resulting from the present war has impressed still further the wisdom and necessity for Australia meeting some of these demands and demonstrates the earlier wisdom of Forestry Departments and private enterprise in making an effort to provide for future requirements by the planting of pine forests that are now, fortunately, reaching the cutting stage.

Since not all of Australian soils are suitable for the production of soft woods, the present larger plantations are to be found in certain sections of the southern and western States, of which W.A., S.A. and Victoria seem to be the most favorable.

A Precious Possession.

The man who literally lit up the world, Thomas A. Edison, prayed **"Would that every citizen could be brought to realise that our forests are a precious possession and that every man's hand should be raised to protect them and to prevent indiscriminate destruction."** In some countries which value natural forests there are definite attempts being continuously made to protect and preserve natural forests as well as studied programmes of re-afforestation. As present forests are denuded of their timbers for the use and comfort of man, new plantings are being sown so that complete sacrifice of timber will be, to a degree, replaced by approved varieties.

In the mad rush of securing gold and other valuable minerals from the earth, other natural products have been ignored. However rich a mineral mine proves to be, it must eventually peter out. There are no known means of replenishing it to ensure a recurring supply, hence the many abandoned mines that are scattered about Australia in areas that were once thriving centres of industry, but are now desolate and comparatively useless districts. But with proper management and by replanting, man can combine with nature and ensure a continuity of supply of one of our often disregarded sources of vital essentials.

Gold versus Timber.

Only because of its comparative scarcity, gold has become the medium for expressing wealth, but if this commodity were to become exhausted, some other medium would be devised to set a standard of value, and the absence of gold would afford no great inconvenience to everyday life. In the case of timber, however, a total elimination would be disastrous. So closely is timber woven into our lives that we could not live without it. Nothing could replace it entirely. Its adaptability and utility is unquestioned.

Our houses, our comfort, even our morning newspaper, are dependent upon the use we make of this universal product. Without timber industry would stagnate and trees and more trees become a vital necessity. Gold mines may come and go, but the demand for timber has always been, and will be, a source of wealth for all time.

The Value of Softwoods.

It depends upon the value placed upon timber lands how the average person reacts to the question of the conservation, re-

Growth of Pinus insignis at 11 years old.

creation and use of our forests. A report in a Melbourne daily paper last month quoted criticism levelled by certain residents in the Frankston district of the action of the Forests Commission in reserving some 1,300 acres of land for a forest plantation in which it was stated that the land would be more valuable if used as an aerodrome. In reply, the Commission stated that the actual return in timber value would approximate £300 per acre.

If this can be taken as an actual estimate of the probable return from soft wood production, it surely answers such criticism and endorses our claim that the time is long overdue when Australia should definitely face a planned programme for the development of soft wood supplies for local requirements.

In later issues we plan to make a survey of what existing pine plantations are doing, how increased plantings can contribute to future production of required soft woods, some facts upon the tremendous cost of imported soft woods and some avenues of use that may still be exploited when and if Australia embarks upon a scientific increase of soft woods production. We believe that this contribution will be welcomed by our thoughtful readers and be both instructive and constructive in a recognised plan that will open up a valuable added commodity of primary production.

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Tasmania: State Fruit Advisory Board.

New South Wales: Griffith Producers' Co-op. Co. Ltd. Batlow Packing House Co-op. Soc. Ltd.

N.S.W. Chamber of Fruit and Vegetable Industries

Successful Annual Meeting

THE ANNUAL MEETING of the N.S.W. Chamber of Fruit and Vegetable Industries was held at 215a Thomas-street, Sydney, on July 31, Mr. W. Musgrove presiding over a large attendance.

In his annual report, the President (Mr. W. Musgrove) congratulated members on the continued achievements of the Chamber: since the last meeting there had been an addition of 64 members, including the Committee of Direction of Fruit Marketing of Brisbane.

After persistent effort the City Council had agreed to a uniform hour of opening, viz., 7 a.m. for all markets.

A Junior Chamber had been inaugurated and good work was being done. Junior members were assisting in many ways, including the visiting of schools with Apple distributions.

A Commonwealth Chamber of Fruit and Vegetable Industries had been formed, so far including Victoria, S. Aust., Queensland and N.S.W., the officers being—President, Mr. L. J. Jenkins; Treasurer, Mr. J. Holmes; Hon. Sec., Mr. P. S. Macdermott.

Vegetable agents had formed a section of the N.S.W. Chamber. The membership was 98 per cent. of those engaged in the trade.

Members of the Tasmanian Fruit Agents' Section had been active in protecting the interests of growers, the wharves being regularly visited. Accurate market reports being broadcast.

The Fruit and Vegetable Traders Pty. Ltd. had been appointed as delivery agents for Sydney for the N.S.W. Apple and Pear Acquisition Committee.

Reference was made in the report to the valued war work of the Chamber members: £5,000 having been donated as a war gift of the Government, and £226 having been collected to date by weekly subscriptions for War Savings Certificates.

Appreciation was expressed for the efficient service of the General Secretary of the Chamber, Mr. P. S. Macdermott.

Those elected to the Council of the Chamber were Messrs. L. J. Jenkins, A. C. Ward, E. S. Terry, J. Holmes and H. P. Woodward.

Motor Notes

PETROL CONSUMPTION.

Saved By Correct Oil.

With the possibility of petrol rationing, ways of saving petrol consumption will be welcomed. The Vacuum Oil Co. forwards the following advice:—

Winter is the testing time for motor cars and the products used in them. Amongst other things low Winter temperatures decrease the output of batteries and thus less power is available to start stiff engines. The internal friction of the lubricating oils used in engines, gear-boxes and back axles is also increased in such circumstances. Few people, whether engineers, mechanics or laymen realise that the internal friction of lubricating oils used in engines for instance, may be 40 times greater at 32 deg. F. than at 90 deg. F. In the case of gear oils the increase may be even greater.

The only protection against excess Winter friction and the resultant increase in petrol consumption is to be found in the use of high grade lubricating oil of the correct body for Winter conditions. Tests recently conducted by the Automotive Engineering Division of Vacuum Oil Company Pty. Ltd. reveal marked economies in petrol consumption from the use of correct Winter oils. In a test car driven at 30 miles per hour, petrol mileage was increased more than 3 per cent. by merely changing the gear oil from a Summer grade to Mobiloil "CW," the Winter grade recommended for the test car. This saving in petrol was increased to 10 per cent. when the Summer oil was drained from the crankcase and replaced with Mobiloil Arctic, the correct Winter oil for the engine.

BRITAIN GOES MECHANICAL.

60,000 Farm Tractors.

Since the war started, 10,000 farm tractors have been purchased by farmers in England, stated the Minister of Agriculture (Sir Rymold Dorman-Smith), according to the "Implement and Machinery Review." He estimated that 60,000 tractors are now available in England and Wales for agricultural work. In Scotland, too, large numbers of tractors have been delivered, and further deliveries are being speeded up. Over 700,000 acres of land had been cultivated at time of the report. In addition to privately bought tractors, local agricultural executive committees have made tractors available to small landowners.

1,000,000 CARS LAID UP.

Petrol Saving in Britain.

Drivers in Australia who complain at the increase in petrol prices and the restricted use of their cars should remember that in Britain at present petrol rationing is being accepted as part of the war effort and that nearly a million cars are laid up and temporarily out of use. Those of us who were in England in 1914-18 will remember how, although the Englishman groused, for he always grouses, he accepted the restrictions with the best grace he could, and "carried on." If necessary Australians too will bike or hike to assist the country in this fateful attack upon Nazism.

FAN BELT SLIP.

If your fan belt is slipping, wipe any grease off and rub the belt firmly with sandpaper. This will be a temporary improvement.

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The Pig Pen

PIG BREEDING.

IF A FARMER desires to improve the quality of his pigs, the actual choice of a breed will not be of very great importance—there are good pigs in all breeds, states Mr. V. R. McDonald, Instructor in Dairying, Roseworthy College, in the "South Australian Journal of Agriculture." The best method would be to select a breed that has proved its ability to stand up to the climatic conditions of the district in which one lives, and then to select, within that breed, individual pigs which show the desired conformation. If cross-bred pigs are desired, the same line can be taken with respect to animals in each of the two or more breeds chosen.

One type of pig that is gaining prominence is the Berkshire Tamworth cross, which has proved sufficiently hardy to withstand the rigorous conditions associated with outdoor or open yard pig-farming. The Berkshire sow is a most careful mother, and has an exceptionally good milk flow, and these features combined with the admitted hardiness and fertility of the Tamworth boar, would appear to make the first or second cross Berkshire-Tamworth a good breeding line.

For bacon production, the Tamworth boar with the long sided Canadian Berkshire sow would give the great length of side desired. Where porkers are required, an early maturing strain of the old type or English Berkshire may take the place of the Canadian sow, although here again the important point would be the conformation of the individual sow rather than her breed.

The Large White Yorkshire appears to be better in sties than in open yards, although the breed is very prolific and shows unsurpassed bacon points.

The selection and setting of a type, either pure or crossbred, that is really suited to our particular conditions of climate and natural feed resources would be of considerable value to the State.

EXPERIMENTS IN FEEDING.

Cost and Profit.

Tests made in South Australia to ascertain the best foods for pigs in country districts where no skim milk is available show that dried whey can be used with advantage. The tests covered four groups of four pigs each, and wheat, skim milk, meat meal and dried whey were the contents of the rations tested. In groups of four, the pigs were fed as follows:—

(1) Wheat and skim milk; (2) wheat and meat meal; (3) wheat and dried whey; (4) wheat, meat meal, and whey.

Wheat cost 3/6 per bushel, skim milk 1½d. per gall., meat meal 1/5 per gall., and dry whey 2.3d. per lb. The table gives the results in groups, days fed, average increase per pig in the period noted, cost of feed per pig, cost per lb. of increased weight, and cost per lb. of pork.

Group 1, days 70, increase 115 lb., cost £1/0/5, cost of increase 2.12d., and cost per lb. pork 2.82d.

Group 2, 84, 101, £1/5/8, 3.04d. and 4.08d.

Group 3, 84, 111, £1/7/8, 2.99d. and 4.00d.

Group 4, 70, 104, £1/5/1, 2.88 and 3.83d.

Thus it will be seen that although skim milk gave the greatest increase in weight and cost less, whey was next best in weight increase, though the cost per lb. in pork was the highest of the four groups tested. The report comes from the "S.A. Journal of Agriculture" and explains that the pigs tested were 70 lb. live weight at the start of the test. It adds that the addition of dried whey is of value in spite of its relatively high cost, which would be reduced if processing of the whey were done on a larger scale than at present and the increased production would be a benefit both to cheese manufacturers and to pig raisers.

TO UNSCREW WATER TAPS.

Tank taps can be unscrewed for repairs with little waste of water. Partly fill a strong sugar bag with sand, tie it firmly to a long pole, and lower into tank till it can be pressed firmly against tap aperture; then unscrew the tap. Pressure of water will force the sandbag into the hole, closing it till the tap has been repaired. In this way, also, the extra piping can be attached to the tank without waiting till it is empty.

Poultry Notes

CLEAN EGGS.

Some Factors Recorded.

Mr. E. M. Funk, writing in the Missouri State Bulletin, quotes some factors influencing the production of clean eggs.

The information presented is based on observations extending over 15 months and including the classification of over 66,000 eggs with respect to cleanliness. Most of the soiling of eggs occurred in the nest, since more than 99 per cent. of all eggs were clean before they came in contact with the nest. Certain breed differences and also differences between individuals within a breed with respect to percentage of clean eggs produced occurred, evidently associated with the temperament and habits of the individuals. A higher percentage of clean eggs was produced during the hot and dry seasons of the year. The percentage of dirty eggs was reduced approximately 50 per cent. by gathering eggs four times per day as compared to gathering only at the end of the day, and there was a higher percentage of dirty eggs present in trap nests in the morning than in the afternoon. When open nests were used, darkening the nests materially decreased the percentage of dirty eggs. A higher percentage of clean eggs was gathered from trap nests than from open nests and from birds confined to laying houses than from those on range. Shavings, oat hulls, sawdust, and excelsior were the most effective nesting materials for preventing dirty eggs. Covering the droppings platform with poultry netting and using strips of gravel in front of laying houses did not significantly affect the percentage of clean eggs.

TELLING THE LAYERS.

Handling Fallacies.

It is often quoted that the thickness of the pelvic bones tell whether a bird is a good or poor layer. In discussing this point, Mr. L. C. Turnill writes in the "Feathered World" (Eng.):—

This is not a guaranteed guide to egg production for ordinary laying stock. The thickness of pelvic bones gives no indication of laying power unless it be that birds with medium thickness of pelvics are the best. I should not like to be too dogmatic on this last point, however.

The width between pelvic bones is not a guide to egg production in any way. If very close the birds are out of lay; if wide they are in lay and the same may be said of size of vent.

Softness of abdomen is of some assistance, but great care must be taken with this character or many good birds may be culled. A bird out of lay at the time of handling will have a hard abdomen, and this hardness is of a leathery type no matter how good a layer she may be or may have been.

When in lay, the abdomen, even of poor layers, is much softer, and I would describe the abdomens of in-lay birds as rubbery. Rubber may be hard or soft.

I have divided laying birds into three degrees of hardness or softness—viz., hard, medium and soft. The hard birds averaged 175 eggs, the medium 190 eggs and the soft 246 eggs. It will thus be seen that on the average the best layers are those with the softest abdomens. The average egg yield of the "hard" abdomen group is, however, good, and as all three grades have birds laying from under 140 to over 250 eggs, much care is needed before one can cull on this character.

SPECIAL NOTICE TO FRUITGROWERS

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Correspondence is invited by the Association.

Office : 21 Wholesale Fruit Market, Queen Street, Melbourne. Phone: F 4866.

Tasmanian Notes

PRUNING WELL ADVANCED :: LABOR SHORTAGE :: ORGANISING MARKETING :: PETROL RATIONING :: CASE MATERIAL

DURING the past month there has been considerable rain in the north of the State, but seasonal work is progressing fairly well: pruning is in full swing. Potato digging has been delayed and deliveries irregular, but potato growers should have a pretty good season in comparison with the fruitgrower. There have been some severe frosts in the Tamar Valley.

There has been sufficient rain in the southern fruitgrowing districts for the time and some cold days have been experienced. Pruning is well advanced in some orchards and many have received their Winter ploughing. Shed-stored fruit is practically exhausted, but the coolstores are well filled. The evaporators and canneries are working late into the season to meet the extra demand.

On the whole, the orchardists appear to be working their places (as nearly as circumstances permit) with the same care as usual, shortage of skilled help is a serious difficulty, and, of course the uncertainty of the marketing prospects for 1941 crop may influence later cultural operations and manuring. Pig raising is certainly on the increase in the fruit districts, and the output should find a ready sale for a long time to come.

It would help our problems considerably if a lot of the poorer-class orchards could be converted permanently to other uses, not only in Tasmania, but on the mainland also; this class of place cannot be expected to pay under the conditions that will probably prevail during the next few years.

Organised Marketing.

We are still waiting to hear the final result of the conference held recently to decide on the best method of handling the 1941 crop and hope that some reasonably workable scheme can be devised. N.S.W. seems to be the stumbling block, their behaviour being like that of a spoilt child who cannot get all his own way. The N.S.W. growers will be heavy losers if the market is absolutely uncontrolled for we all know that a big percentage of the poor quality fruit that goes on to the Sydney market is grown in N.S.W.

I notice that Mr. F. Brand, of the Orange Producers' Rural Co-op. Society, takes exception to a paragraph in my June notes re the production in his district. I got my figure of 122,000 from "Hansard," and it was stated to be official. He will find it in Mr. C. W. Frosts' (M.H.R.) speech when the continuation of Acquisition was being discussed in the House. From my personal acquaintance with the Sydney market, I repeat that just as big a percentage of inferior fruit is grown in N.S.W. as in any other State. It seems to be a matter of political pull that secures them special consideration.

The South Australian Fruit Marketing Association put forward a scheme (see July issue of "F.W.") that has a lot to commend it, and appears to have been well thought out in its details.

Petrol Rationing.

The petrol rationing proposals are still indefinite, and the suggestion that the allowance for cars should be increased to 60 miles per week, seems so liberal as to be hardly a rationing at all to a lot of private pleasure vehicles. If rationing is necessary or advisable, why not do it effectively on the purely pleasure vehicle, this would not only save petrol, but a good many lives every weekend.

I notice with regret that one of our pioneer orchardists, Mr. F. F. Locke, of Premaydena, Tasman Peninsula, has passed away. He was always keenly interested in the production of both Apples and Pears from the early days to the present time. His son, Mr. Lionel Locke, is well known in the Sydney fruit market, while another son, Mr. Frank Locke, also owns a nice orchard at Premaydena.

The question of case material for the 1941 crop is causing some little worry. It is doubtful if local mills will be able to cut the quantity necessary in time to let it season properly and imports seem problematical. Wrapping paper will also be a difficulty.

SUPERPHOSPHATE PRICES.

Increase Resented in W.A.

The Premier of W.A., Mr. J. C. Willcock, recently stated that the State Government would make representations to the Federal Government regarding the increased price for superphosphates in view of recent increases announced. The two recent increases represent an added charge to producers of £420,000 per year and may break the back of many producers. He claimed that the increases vitally affected national economy.

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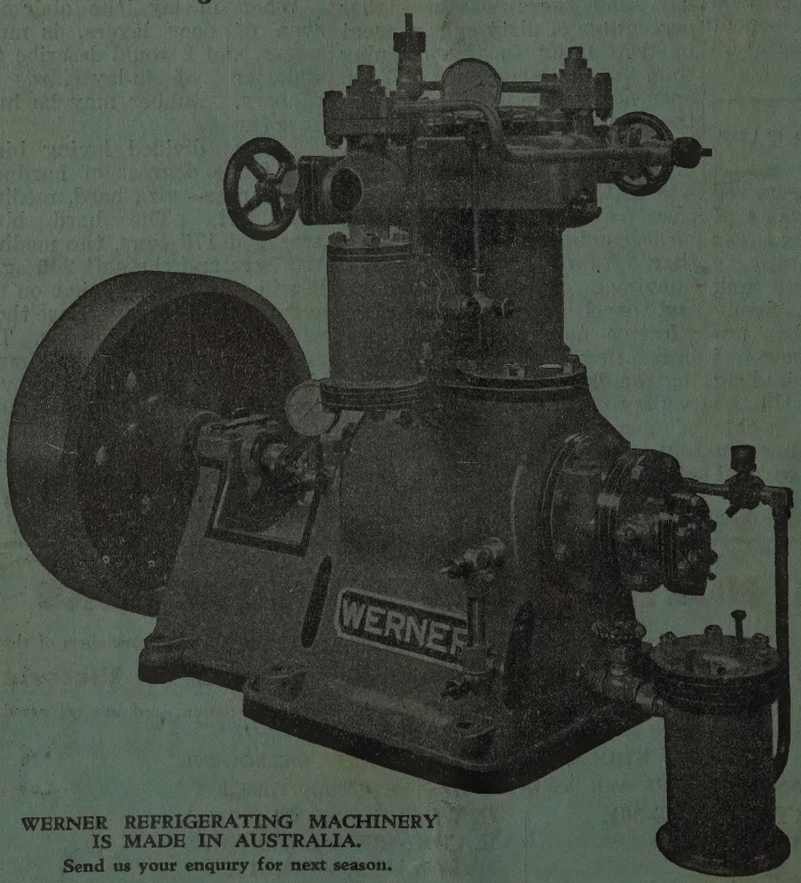

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